



**FUEL ☆ HEATING ☆ AIR CONDITIONING**

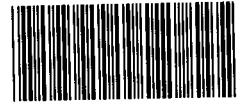
Residential – Commercial

[www.fritch.com](http://www.fritch.com)

*"For Comfort You Can Count On"*



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SDMS DocID

2199434

April 23, 2012

Kenneth I. Rose, III, Financial Analyst  
U.S. environmental Protection Agency, Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

**Re: Enclosure E**

Dear Mr. Rose:

As requested, enclosed are copies of the MSDS sheets that are listed on Enclosure E.

Sincerely,

Anthony J. Mauser  
President  
Fritch Inc.

**Fuel ☆ Heating ☆ Air Conditioning**

116 River Street, P.O. Box 1037, Bethlehem, PA 18016-1037 • 610-691-1212 • Fax 610-974-8290

*Serving the Lehigh Valley for more than 85 years.*



ORIGINAL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

APR 12 2012

Anthony J. Mauser, President  
Fritch Fuel, Heating, Air Conditioning  
116 River Street  
PO Box 1037  
Bethlehem, PA 18016-1037

**Re: Required Submission of Information  
Metro Container Site, Trainer, Pennsylvania**

Dear Mr. Mauser:

The U.S. Environmental Protection Agency ("EPA") has received your responses to its March 9, 2012 Information Request issued to Fritch Fuel Company ("Fritch"). Based on those responses, EPA is seeking additional information concerning the operations of Fritch and clarification of certain answers provided in the responses.

**EPA hereby requests that Fritch respond completely and timely to the information requested in Enclosure E to this letter.**

Pursuant to the authority of Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9604(e), EPA has the authority to require you to furnish all information and documents in your possession, custody or control, or in the possession, custody or control of any of your employees or agents, which concern, refer, or relate to hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. Section 9601(33), which were transported to, stored, treated, or disposed of at the above referenced Site and which concern your ability to pay EPA's costs in cleaning up the Site.

Section 104 of CERCLA authorizes EPA to pursue penalties for failure to comply with that section or for failure to respond adequately to required submissions of information. In addition, providing false, fictitious, or fraudulent statements or representations may subject you to criminal penalties under 18 U.S.C. § 1001. The information you provide may be used by EPA in administrative, civil, or criminal proceedings.

You must respond in writing to this required submission of information within **twenty (20) calendar days** of your receipt of this letter. The response must be signed by an appropriately authorized corporate official. If, for any reason, you do not provide all information responsive to this letter, then in your answer to EPA you must: (1) describe specifically what was not provided, and (2) provide to EPA an appropriate reason why the information was not

provided.

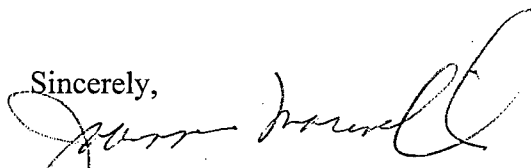
All documents and information should be sent to:

Kenneth I. Rose, III, Financial Analyst (3HS62)  
U.S. Environmental Protection Agency, Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

This required submission of information is not subject to the approval requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. Section 3501, et seq.

If you have any questions concerning this matter, please contact Kenneth I. Rose III at 215-814-3147, or have your attorney contact Senior Assistant Regional Counsel Andrew Goldman at (215) 814-2487.

Sincerely,



Joanne Marinelli, Chief  
Cost Recovery Branch  
Hazardous Site Cleanup Division

- Enclosures: A. Business Confidentiality Claims/Disclosure of Your Response to  
EPA Contractors and Grantees  
B. List of Contractors that May Review Your Response  
C. Definitions  
D. Instructions  
E. Information Requested

cc: Andrew Goldman (3RC41)  
Kenneth I. Rose, III (3HS62)  
PADEP

**Enclosure E**

**Information Required**

1. Provide copies of MSDS and/or all other documents related to the composition of following finished products that you identified as present in the drums that were placed in Metro Container Corporation's trailer at your facility:
  - a. Sunfleet Motor Oils – all grades
  - b. Sunfleet Transmission Fluids – all grades
  - c. Sunfleet Gear Oils – all grades
  - d. Sunvis Hydraulic Oils – all grades
  - e. Sunoco Mineral Spirits
  - f. Texaco Permanent Anti-Freeze
  - g. Houghton Permanent Anti-Freeze

SUNFLEET 10W-30 SG/CC      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000301400  
INACTIVE DATE: 07/06/1996

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1. CHEMICAL PRODUCT AND COMPANY INFORMATION

REVISION DATE: 11/17/1994  
UN NUMBER- N/A

PRIMARY APPLICATION- ENGINE OIL

MANUFACTURER- SUN COMPANY, INC.  
TEN PENN CENTER  
1801 MARKET STREET  
PHILADELPHIA      PA 19103-1699

SYNONYMS.....: ENGINE OIL  
CAS REGISTRY NO: SEE SEC. 2  
CAS NAME.....: NO CLASSIFICATION - MIXTURE  
CHEMICAL FAMILY: BLEND  
INFORMATION

SUPPLIER... MARIA DAYRIT  
PHONE.....: (215) 246-8201

EMERGENCY PHONE NUMBERS (AFTER NORMAL BUSINESS HOURS)  
SUN CO.. 1-800-964-8861  
CHEMTREC. 1-800-424-9300

=====

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT/CAS NO.	LO%	HI%	OSHA		EXPOSURE GUIDELINES		TWA	STEL	TWA	STEL	TWA	STEL	UNIT
			TWA	STEL	ACGIH	SUN/MFR							

-----

LIMITS FOR THE PRODUCT:

NO SPECIFIC LIMIT

\* NO COMPONENTS FOR THIS PRODUCT \*

ADDITIONAL EXPOSURE LIMITS ----- GOVERNMENT REGULATION  
OTHER LIMIT- OIL MIST: 5 MG/M3 (OSHA PEL/ACGIH TLV)

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3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW -----

NOT EXPECTED TO CAUSE A SEVERE EMERGENCY HAZARD.

APPEARANCE-- DARK AMBER FLUID      ODOR-- MOTOR OIL ODOUR

POTENTIAL HEALTH EFFECTS -----

PRIMARY ROUTES OF ENTRY- INHALATION( ) SKIN( X ) EYE( ) INGESTION( )

SUNFLEET 10W-30 SG/CC      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000301400  
INACTIVE DATE: 07/06/1996

INHALATION -----

NO EFFECTS EXPECTED.

SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MAY  
CAUSE MILD IRRITATION WITH PROLONGED OR REPEATED CONTACT.

EYE -----

CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

INGESTION -----

PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

CARCINOGEN LISTED BY-IARC(NO)    NTP(NO)    OSHA(NO)    ACGIH(NO)    OTHER(NO)

PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE-  
SKIN DISORDERS

=====

4. FIRST AID MEASURES

INHALATION -----

MOVE PERSON TO FRESH AIR.

SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE  
REUSE.

EYE -----

FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN  
MEDICAL ASSISTANCE.

INGESTION -----

PRACTICALLY NON-TOXIC -- INDUCTION OF VOMITING NOT REQUIRED. OBTAIN  
EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER  
MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

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5. FIRE FIGHTING MEASURES

FLASH POINT: 390 MINIMUM COC (DEG. F); 199 MINIMUM COC (DEG. C)  
AUTOIGNITION TEMP.: 685 ESTIMATED (DEG. F); 363 ESTIMATED (DEG. C)

---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL):    NOT DETERMINED % VOLUME

UPPER EXPLOSIVE LIMIT (UEL):    NOT DETERMINED % VOLUME

FIRE AND EXPLOSION HAZARDS -----

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

EXTINGUISHING-MEDIA -----

WATER SPRAY. REGULAR FOAM. DRY CHEMICAL. CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS -----

WEAR SELF-CONTAINED BREATHING APPARATUS. WEAR STRUCTURAL FIREFIGHTERS  
PROTECTIVE CLOTHING.

NFPA/HMIS CLASSIFICATION

HEALTH - 0 / 0

HAZARD RATING

0=LEAST                    1=SLIGHT

SUNFLEET 10W-30 SG/CC      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000301400  
INACTIVE DATE: 07/06/1996

FIRE - 1 / 1  
REACTIVITY - 0 / 0  
PERSONAL PROTECTION INDEX - X

2=MODERATE    3=HIGH  
4=EXTREME

SPECIFIC HAZARD: NONE LISTED

=====

#### 6. ACCIDENTAL RELEASE MEASURES

CONTAIN SPILL. USE PERSONAL PROTECTIVE EQUIPMENT STATED IN SECTION 8.  
ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL. SHOVEL,  
SWEEP OR VACUUM SPILL.

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#### 7. HANDLING AND STORAGE

NFPA CLASS IIIB STORAGE. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.  
AVOID CONTACT WITH EYES. WASH THOROUGHLY AFTER HANDLING.

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#### 8. EXPOSURE CONTROL / PERSONAL PROTECTION

CONSULT WITH A HEALTH/SAFETY PROFESSIONAL FOR SPECIFIC SELECTION.

##### VENTILATION -----

USE ONLY WITH ADEQUATE VENTILATION. VENTILATE AS NEEDED TO COMPLY WITH  
EXPOSURE LIMIT. GENERAL DILUTION VENTILATION ACCEPTABLE.

##### PERSONAL PROTECTIVE EQUIPMENT -----

###### EYE -----

SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF  
PRODUCT.

###### GLOVES -----

PROTECTIVE GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE  
AVOIDED. THE FOLLOWING GLOVE MATERIALS ARE ACCEPTABLE: POLYVINYL  
CHLORIDE (PVC); NEOPRENE; NITRILE; POLYVINYL ALCOHOL; VITON;

###### RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH  
CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT  
NEEDED UNLESS PRODUCT IS HEATED OR MISTED. HALF-MASK AIR PURIFYING  
RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS  
ACCEPTABLE TO 10 TIMES THE EXPOSURE LIMIT. FULL-FACE AIR PURIFYING  
RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS  
ACCEPTABLE TO 50 TIMES THE EXPOSURE LIMIT. PROTECTION BY AIR PURIFYING  
RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE-DEMAND FULL-FACE  
SUPPLIED AIR RESPIRATOR OR SCBA FOR EXPOSURES ABOVE 50X THE EXPOSURE  
LIMIT. IF EXPOSURE IS ABOVE IDLH (IMMEDIATELY DANGEROUS TO LIFE & HEALTH)  
OR THERE IS THE POSSIBILITY OF AN UNCONTROLLED RELEASE OR EXPOSURE  
LEVELS ARE UNKNOWN THEN USE A POSITIVE PRESSURE-DEMAND FULL-FACE  
SUPPLIED AIR RESPIRATOR WITH ESCAPE BOTTLE OR SCBA.

###### OTHER -----

IF CONTACT IS UNAVOIDABLE, WEAR CHEMICAL RESISTANT CLOTHING. THE

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET 10W-30 SG/CC

CODE R00000301400

INACTIVE DATE: 07/06/1996

FOLLOWING MATERIALS ARE ACCEPTABLE AS PROTECTIVE CLOTHING MATERIALS:  
POLYVINYL ALCOHOL (PVA); POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE;  
VITON; POLYURETHANE; LAUNDER SOILED CLOTHES.

## =====

## 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT.....: HIGH WITH (DEG. F) \_\_\_\_\_ WIDE RANGE (DEG. C)  
MELTING POINT.....: N/A (DEG. F) \_\_\_\_\_ N/A (DEG. C)  
SPECIFIC GRAVITY.....: 0.87 (WATER=1)  
PACKING DENSITY.....: N/A (KG/M3)  
VAPOR PRESSURE.....: <0.0001 (MM HG @ 20 DEG C)  
VAPOR DENSITY.....: >10 (AIR=1)  
SOLUBILITY IN WATER.: NIL (% BY VOLUME)  
PH INFORMATION.....: N.D. AT CONC. N.D. G/L H2O  
% VOLATILES BY VOL.: NIL  
EVAPORATION RATE.....: 1000X SLOWER (ETHYL ETHER=1)  
OCTANOL/WATER COEFF.: N.D.  
APPEARANCE.....: DARK AMBER FLUID  
ODOR.....: MOTOR OIL ODOUR  
ODOR THRESHOLD.....: N.D. (PPM)  
VISCOSITY.....: N.D. SUS @ N.D DEG F ... N.D. CST @ N.D DEG C  
MOLECULAR WEIGHT.....: N.D. (G/MOLE)

## =====

## 10. STABILITY AND REACTIVITY

STABILITY -----  
STABLE.  
INCOMPATIBLE MATERIALS -----  
STRONG OXIDIZERS  
HAZARDOUS DECOMPOSITION -----  
COMBUSTION WILL PRODUCE CARBON MONOXIDE AND ASPHYXIANTS.  
POLYMERIZATION -----  
WILL NOT OCCUR.

## =====

## 11. TOXICOLOGICAL INFORMATION

FOR THE PRODUCT -----  
INHALATION: LOW ACUTE TOXICITY. SKIN: EXPECTED TO BE ACUTELY NON-TOXIC  
IF ABSORBED. MILD IRRITATION WITH PROLONGED OR REPEATED CONTACT. EYE:  
MILDLY IRRITATING ON CONTACT. ORAL: PRACTICALLY NON-TOXIC.



SUNFLEET 10W-30 SG/CC      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000301400  
INACTIVE DATE: 07/06/1996

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12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY -----

NO DATA AVAILABLE

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13. DISPOSAL CONSIDERATIONS

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. NOT A RCRA HAZARDOUS WASTE IF UNCONTAMINATED. IF "USED", RCRA CRITERIA (IGNITABILITY, REACTIVITY, CORROSIVITY, TOXICITY CHARACTERISTICS) MUST BE DETERMINED. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

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14. TRANSPORTATION INFORMATION

DOT-  
PROPER SHIPPING NAME- PETROLEUM LUBRICATING OIL  
HAZARD CLASS- NOT REGULATED  
IDENTIFICATION NUMBER- NOT REGULATED  
LABEL REQUIRED- NOT REGULATED

IMDG- PROPER SHIPPING NAME- NO DATA AVAILABLE

IATA- PROPER SHIPPING NAME- NO DATA AVAILABLE

=====

15. REGULATORY INFORMATION

SARA 302 THRESHOLD PLANNING QUANTITY. N/A

SARA 304 REPORTABLE QUANTITY ..... N/A

SARA 311 CATEGORIES- IMMEDIATE (ACUTE) HEALTH EFFECTS.. N  
                          DELAYED (CHRONIC) HEALTH EFFECTS.. Y  
                          FIRE HAZARD ..... N  
                          SUDDEN RELEASE OF PRESSURE HAZARD. N  
                          REACTIVITY HAZARD ..... N

WHEN A PRODUCT AND/OR COMPONENT IS LISTED BELOW, THE REGULATORY LIST ON WHICH IT APPEARS IS INDICATED.

THIS PRODUCT OR ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE U.S. TSCA INVENTORY.

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET 10W-30 SG/CC

CODE R00000301400

INACTIVE DATE: 07/06/1996

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16. OTHER INFORMATION

CAUTION! PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE  
HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED AREA  
WITH SOAP AND WATER. WHMIS CLASSIFICATION: NOT CONTROLLED

SUNFLEET 10W-40 SG/CC      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000301500  
INACTIVE DATE: 04/09/1994

\*\*\* SECTION 1 - IDENTIFICATION \*\*\*

M.S.D.S DATE: 12/17/91  
UN/NA NUMBER:

MANUFACTURER: SUN REFINING AND MARKETING COMPANY  
TEN PENN CENTER  
1801 MARKET STREET  
PHILADELPHIA PA 19103-1699

SYNONYMS.....: ENGINE OIL  
CAS REGISTRY NO: SEE SEC. 2  
CAS NAME.....: NO CLASSIFICATION - MIXTURE  
CHEMICAL-FAMILY: BLEND  
INFORMATION:  
SUPPLIER....: JOANNE HOUCK  
PHONE.....: 215-977-6133  
AFTER HOURS: 1-800-964-8861

\*\*\* SECTION 2 - INGREDIENTS \*\*\*

SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL, CAS# 64741-88-4; ETHYLENE/PROPYLENE COPOLYMER, CAS# 9010-79-1; ZINC SALT OF DIALKYL DITHIOPHOSPHORIC ACID; POLYISOBUTENYL SUCCINIC ANHYDRIDE; MAGNESIUM ALKYLARYL DETERGENT; AND LESS THAN 1% OF METHACRYLATE COPOLYMER. ELEMENTAL ANALYSIS: 0.3% SULFUR; 0.1% NITROGEN; 0.1% PHOSPHORUS AND 0.1% ZINC. WHMIS CLASSIFICATION: NOT CONTROLLED  
'INGREDIENTS WITH \* IN CAS NUMBER ARE SUBJECT TO REPORTING REQUIREMENTS OF SECTION 313 EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW AND 40CFR372'

\*\*\* SECTION 3 - PHYSICAL DATA \*\*\*

BOILING POINT.....	HIGH WITH	(DEG. F)	WIDE RANGE	(DEG. C)
MELTING POINT.....	N/A	(DEG. F)	N/A	(DEG. C)
SPECIFIC GRAVITY....	0.88	(H2O=1)		
PACKING DENSITY.....	N/A	(KG/M3)		
VAPOR PRESSURE.....	<0.0001	(MM HG AT 20C)		
VAPOR DENSITY.....	>10	(AIR=1)		
SOLUBILITY IN WATER..	NIL	(% BY VOL)		
PH INFORMATION.....	N.D.	AT CONC.	G/L H2O	
% VOLATILES BY VOL..	NIL			
EVAPORATION RATE....	1000X SLOWER		(ETHYL ETHER=1)	
OCTANOL/WATER COEFF..	N.D.			
APPEARANCE.....	DARK AMBER FLUID			
ODOR.....	MOTOR OIL ODOUR			
ODOR THRESHOLD.....	N.D.	(PPM)		

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET 10W-40 SG/CC

CODE R00000301500

INACTIVE DATE: 04/09/1994

## \*\*\* SECTION 4 - FIRE AND EXPLOSION DATA \*\*\*

FLASH POINT 375 MINIMUM COC (DEG. F) 191 MINIMUM COC (DEG. C)  
AUTOIGNITION TEMP. 685 ESTIMATED (DEG. F) 363 ESTIMATED (DEG. C)

---NFPA CLASSIFICATION--- -----HAZARD RATING-----  
HEALTH - 0 0 - LEAST 3 - HIGH  
FIRE - 1 1 - SLIGHT 4 - EXTREME  
REACTIVITY 0 2 - MODERATE

## SPECIFIC HAZARD

## ---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL) NOT DETERMINED % VOL.

UPPER EXPLOSIVE LIMIT (UEL) NOT DETERMINED % VOL.

## FIRE AND EXPLOSION HAZARDS -----

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

## EXTINGUISHING MEDIA -----

WATER FOG. MECHANICAL FOAM. DRY CHEMICAL POWDER. CARBON DIOXIDE.

## SPECIAL FIRE FIGHTING INSTRUCTIONS----

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE FIGHTING IN CONFINED SPACE.

## \*\*\* SECTION 5 - HEALTH HAZARD INFORMATION \*\*\*

EXPOSURE LIMITS----- GOVERNMENT REGULATION  
OTHER LIMIT: OIL MIST: 5 MG/M3 (OSHA PEL/ACGIH TLV)

## \*\*\* ROUTES OF EXPOSURE AND EFFECTS \*\*\*

## INHALATION -----

NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

## SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MILD IRRITATION WITH PROLONGED OR REPEATED CONTACT.

## EYE -----

CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

## INGESTION -----

PRACTICALLY NON-TOXIC (LD50 &gt; 15G/KG).

## \*\*\* FIRST AID \*\*\*

## INHALATION -----

MOVE PERSON TO FRESH AIR.

## SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

## EYE -----

FLUSH WITH WATER FOR AT LEAST 15 MINUTES.

## INGESTION -----

GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SUNFLEET 10W-40 SG/CC      \*\*    INACTIVE MSDS PRINT    \*\*

CODE R00000301500  
INACTIVE DATE: 04/09/1994

\*\*\* SECTION 6 - REACTIVITY DATA \*\*\*

STABILITY-----

STABLE.

INCOMPATIBLE MATERIALS-----

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION-----

PRODUCTS:    CARBON MONOXIDE AND ASPHYXIANTS

POLYMERIZATION-----

WILL NOT OCCUR.

\*\*\* SECTION 7 - SPECIAL PROTECTION INFORMATION \*\*\*

VENTILATION -----

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

\*\*\* PERSONAL PROTECTIVE EQUIPMENT \*\*\*

EYE -----

SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF PRODUCT.

GLOVES -----

IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED.

OTHER -----

LAUNDER SOILED CLOTHES.

\*\*\* SECTION 8 - DISPOSAL PROCEDURES \*\*\*

AQUATIC TOXICITY -----

NOT DETERMINED

SPILL, LEAK OR RELEASE-----

CONTAIN SPILL. ABSORB ON INERT MATERIAL. SHOVEL, SWEEP OR VACUUM SPILL.

WASTE DISPOSAL METHOD-----

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

\*\*\* SECTION 9 - SPECIAL PRECAUTIONS \*\*\*

STORAGE AND HANDLING CONDITIONS-----

NFPA CLASS IIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

ORIGINAL

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET 10W-40 SG/CC

CODE R00000301500

INACTIVE DATE: 04/09/1994

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\*\*\* SECTION 10 - ADDITIONAL PRECAUTIONS AND LABELS \*\*\*

CAUTION! PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE  
HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED  
AREA WITH SOAP AND WATER.

SUNFLEET SAE 30

\*\* INACTIVE MSDS PRINT \*\*

CODE R00000301200  
INACTIVE DATE: 03/05/1994

## \*\*\* SECTION 1 - IDENTIFICATION \*\*\*

M.S.D.S DATE: 12/17/91

UN/NA NUMBER:

MANUFACTURER: SUN REFINING AND MARKETING COMPANY  
TEN PENN CENTER  
1801 MARKET STREET  
PHILADELPHIA PA 19103-1699

SYNONYMS.....: ENGINE OIL  
CAS REGISTRY NO: SEE SEC. 2  
CAS NAME.....: NO CLASSIFICATION - MIXTURE  
CHEMICAL-FAMILY: BLEND  
INFORMATION:  
SUPPLIER....: JOANNE HOUCK  
PHONE.....: 215-977-6133  
AFTER HOURS: 1-800-964-8861

## \*\*\* SECTION 2 - INGREDIENTS \*\*\*

SEVERELY SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE (PETROLEUM), CAS# 64741-88-4; SEVERELY SOLVENT-REFINED RESIDUUM CAS# 64742-01-4; ZINC SALT OF DIALKYL DITHIOPHOSPHORIC ACID; BORATED POLYISOBUTENYL SUCCINIC ANHYDRIDE; MAGNESIUM ALKYL DETERGENT; CONTAINS LESS THAN 1.0 % METHACRYLATE; PRODUCT TYPICALLY CONTAINS: 0.11% ZINC; 0.1% PHOSPHORUS; 0.29% SULFUR; 0.13 % MAGNESIUM. \*  
'INGREDIENTS WITH \* IN CAS NUMBER ARE SUBJECT TO REPORTING REQUIREMENTS OF SECTION 313 EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW AND 40CFR372'

## \*\*\* SECTION 3 - PHYSICAL DATA \*\*\*

BOILING POINT.....	WIDE RANGE	(DEG. F)	WIDE RANGE	(DEG. C)
MELTING POINT.....	N/A	(DEG. F)	N/A	(DEG. C)
SPECIFIC GRAVITY.....	0.89	(H2O=1)		
PACKING DENSITY.....	N/A	(KG/M3)		
VAPOR PRESSURE.....	<0.0001	(MM HG AT 20C)		
VAPOR DENSITY.....	15	(AIR=1)		
SOLUBILITY IN WATER..	NIL	(% BY VOL)		
PH INFORMATION.....	7.4	AT CONC.	G/L H2O	
% VOLATILES BY VOL..	NIL			
EVAPORATION RATE....	1000X SLOWER		(ETHYL ETHER=1)	
OCTANOL/WATER COEFF..	N.D.			
APPEARANCE.....	AMBER FLUID			
ODOR.....	MOTOR OIL			
ODOR THRESHOLD.....	N.D.	(PPM)		

## \*\* INACTIVE MSDS PRINT \*\*

SUNFLEET SAE 30

CODE R00000301200  
INACTIVE DATE: 03/05/1994

## \*\*\* SECTION 4 - FIRE AND EXPLOSION DATA \*\*\*

FLASH POINT 410 MINIMUM COC (DEG. F) 210 MINIMUM COC (DEG. C)  
AUTOIGNITION TEMP. 730 ESTIMATED (DEG. F) 388 ESTIMATED (DEG. C)

---NFPA CLASSIFICATION---      -----HAZARD RATING-----  
HEALTH - 0      0 - LEAST      3 - HIGH  
FIRE - 1      1 - SLIGHT      4 - EXTREME  
REACTIVITY 0      2 - MODERATE

## SPECIFIC HAZARD

## ---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL) NOT DETERMINED % VOL.

UPPER EXPLOSIVE LIMIT (UEL) NOT DETERMINED % VOL.

## FIRE AND EXPLOSION HAZARDS -----

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

## EXTINGUISHING MEDIA -----

WATER FOG. MECHANICAL FOAM. DRY CHEMICAL POWDER. CARBON DIOXIDE.

## SPECIAL FIRE FIGHTING INSTRUCTIONS----

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE FIGHTING IN CONFINED SPACE.

## \*\*\* SECTION 5 - HEALTH HAZARD INFORMATION \*\*\*

## EXPOSURE LIMITS----- GOVERNMENT REGULATION

OTHER LIMIT: OIL MIST: 5 MG/M3 (OSHA PEL/ACGIH TLV)

## \*\*\* ROUTES OF EXPOSURE AND EFFECTS \*\*\*

## INHALATION -----

NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

## SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED.

## EYE -----

CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

## INGESTION -----

PRACTICALLY NON-TOXIC (LD50 &gt; 15G/KG).

## \*\*\* FIRST AID \*\*\*

## INHALATION -----

MOVE PERSON TO FRESH AIR.

## SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

## EYE -----

FLUSH WITH WATER FOR AT LEAST 15 MINUTES.

## INGESTION -----

GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.



SUNFLEET SAE 30

\*\* INACTIVE MSDS PRINT \*\*

CODE R00000301200  
INACTIVE DATE: 03/05/1994

## \*\*\* SECTION 6 - REACTIVITY DATA \*\*\*

STABILITY-----

STABLE.

INCOMPATIBLE MATERIALS-----

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION-----

PRODUCTS: CARBON MONOXIDE AND ASPHYXIANTS

POLYMERIZATION-----

WILL NOT OCCUR.

## \*\*\* SECTION 7 - SPECIAL PROTECTION INFORMATION \*\*\*

VENTILATION -----

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

\*\*\* PERSONAL PROTECTIVE EQUIPMENT \*\*\*

EYE -----

SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF  
PRODUCT.

GLOVES -----

PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.

RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH  
CERTIFIED RESPIRATORY PROTECTION.

OTHER -----

IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDER  
SOILED CLOTHES.

## \*\*\* SECTION 8 - DISPOSAL PROCEDURES \*\*\*

AQUATIC TOXICITY -----

NOT DETERMINED

SPILL, LEAK OR RELEASE-----

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL METHOD-----

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. NOT A RCRA HAZARDOUS WASTE  
IF UNCONTAMINATED. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO  
AUTHORIZED DISPOSAL SERVICE.

## \*\*\* SECTION 9 - SPECIAL PRECAUTIONS \*\*\*

STORAGE AND HANDLING CONDITIONS-----

NFPA CLASS IIIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

ORIGINAL

SUNFLEET SAE 30      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000301200  
INACTIVE DATE: 03/05/1994

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\*\*\* SECTION 10 - ADDITIONAL PRECAUTIONS AND LABELS \*\*\*

CAUTION! PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE  
HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED  
AREA WITH SOAP AND WATER.

## \*\* INACTIVE MSDS PRINT \*\*

SUNFLEET SAE 40

CODE R00000303800  
INACTIVE DATE: 09/07/1994

## \*\*\* SECTION 1 - IDENTIFICATION \*\*\*

M.S.D.S DATE: 12/16/91

UN/NA NUMBER:

MANUFACTURER: SUN REFINING AND MARKETING COMPANY  
TEN PENN CENTER  
1801 MARKET STREET  
PHILADELPHIA PA 19103-1699

SYNONYMS.....: ENGINE OIL  
CAS REGISTRY NO: N/A  
CAS NAME.....: NO CLASSIFICATION - MIXTURE  
CHEMICAL-FAMILY: BLEND  
INFORMATION:  
SUPPLIER....: BRENDA ANDERSON  
PHONE.....: 519-337-2301  
AFTER HOURS: 1-800-964-8861

## \*\*\* SECTION 2 - INGREDIENTS \*\*\*

SEVERELY SOLVENT REFINED HEAVY PARAFFINIC DISTILLATE (PETROLEUM), CAS# 64741-88-4; SEVERELY SOLVENT-REFINED RESIDUUM CAS# 64742-01-4; ZINC SALT OF DIAKYL DITHIOPHOSPHORIC ACID; BORATED POLYISOBUTENYL SUCCINIC ANHYD RIDE; MAGNESIUM ALKYL DETERGENT; CONTAINS < 1.0 % METHACRYLATE; PRODUCT TYPICALLY CONTAINS: 0.11% ZINC; 0.1% PHOSPHORUS; 0.29% SULFUR; 0.13 % MAGNESIUM.

'INGREDIENTS WITH \* IN CAS NUMBER ARE SUBJECT TO REPORTING REQUIREMENTS OF SECTION 313 EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW AND 40CFR372'

## \*\*\* SECTION 3 - PHYSICAL DATA \*\*\*

BOILING POINT.....	WIDE RANGE	(DEG. F)	WIDE RANGE	(DEG. C)
MELTING POINT.....	N/A	(DEG. F)	N/A	(DEG. C)
SPECIFIC GRAVITY.....	0.89	(H2O=1)		
PACKING DENSITY.....	N/A	(KG/M3)		
VAPOR PRESSURE.....	<0.0001	(MM HG AT 20C)		
VAPOR DENSITY.....	>15	(AIR=1)		
SOLUBILITY IN WATER..	NIL	(% BY VOL)		
PH INFORMATION.....	7.4	AT CONC.	G/L H2O	
% VOLATILES BY VOL..	NIL			
EVAPORATION RATE....	1000X SLOWER		(ETHYL ETHER=1)	
OCTANOL/WATER COEFF..	N.D.			
APPEARANCE.....	AMBER FLUID			
ODOR.....	MOTOR OIL			
ODOR THRESHOLD.....	N.D.	(PPM)		

## \*\* INACTIVE MSDS PRINT \*\*

SUNFLEET SAE 40

CODE R00000303800  
INACTIVE DATE: 09/07/1994

## \*\*\* SECTION 4 - FIRE AND EXPLOSION DATA \*\*\*

FLASH POINT 420 MINIMUM COC (DEG. F) 215 MINIMUM COC (DEG. C)  
AUTOIGNITION TEMP. 740 ESTIMATED (DEG. F) 393 ESTIMATED (DEG. C)

---NFPA CLASSIFICATION---      -----HAZARD RATING-----  
HEALTH - 0      0 - LEAST      3 - HIGH  
FIRE - 1      1 - SLIGHT      4 - EXTREME  
REACTIVITY 0      2 - MODERATE

## SPECIFIC HAZARD

## ---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL) NOT DETERMINED % VOL.

UPPER EXPLOSIVE LIMIT (UEL) NOT DETERMINED % VOL.

## FIRE AND EXPLOSION HAZARDS -----

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

## EXTINGUISHING MEDIA -----

WATER FOG. MECHANICAL FOAM. DRY CHEMICAL POWDER. CARBON DIOXIDE.

## SPECIAL FIRE FIGHTING INSTRUCTIONS----

WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE FIGHTING IN CONFINED SPACE.

## \*\*\* SECTION 5 - HEALTH HAZARD INFORMATION \*\*\*

## EXPOSURE LIMITS----- SUN RECOMMENDATION

8HR. TIME WEIGHTED PERMISSIBLE EXPOSURE PPM \_\_\_\_\_ 5.0 MG/M3

## \*\*\* ROUTES OF EXPOSURE AND EFFECTS \*\*\*

## INHALATION -----

NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.

## SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). NO SKIN EFFECTS EXPECTED.

## EYE -----

CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

## INGESTION -----

PRACTICALLY NON-TOXIC (LD50 &gt; 15G/KG).

## \*\*\* FIRST AID \*\*\*

## INHALATION -----

MOVE PERSON TO FRESH AIR.

## SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.

## EYE -----

FLUSH WITH WATER FOR AT LEAST 15 MINUTES.

## INGESTION -----

GIVE LIQUIDS AND INDUCE VOMITING UNLESS VICTIM IS UNCONSCIOUS. OBTAIN EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

## \*\* INACTIVE MSDS PRINT \*\*

SUNFLEET SAE 40

CODE R00000303800  
INACTIVE DATE: 09/07/1994

## \*\*\* SECTION 6 - REACTIVITY DATA \*\*\*

STABILITY-----

STABLE.

INCOMPATIBLE MATERIALS-----

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION-----

PRODUCTS: CARBON MONOXIDE AND ASPHYXIANTS

POLYMERIZATION-----

WILL NOT OCCUR.

## \*\*\* SECTION 7 - SPECIAL PROTECTION INFORMATION \*\*\*

VENTILATION -----

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

\*\*\* PERSONAL PROTECTIVE EQUIPMENT \*\*\*

EYE -----

SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED

GLOVES -----

PRODUCT MINIMALLY IRRITATING TO SKIN. LOCAL SAFETY POLICY DECISION.

RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH  
CERTIFIED RESPIRATORY PROTECTION.

OTHER -----

NONE NORMALLY NEEDED.

## \*\*\* SECTION 8 - DISPOSAL PROCEDURES \*\*\*

AQUATIC TOXICITY -----

NOT DETERMINED

SPILL, LEAK OR RELEASE-----

CONTAIN SPILL. ABSORB ON INERT MATERIAL.

WASTE DISPOSAL METHOD-----

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. NOT A RCRA HAZARDOUS WASTE  
IF UNCONTAMINATED. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO  
AUTHORIZED DISPOSAL SERVICE.

## \*\*\* SECTION 9 - SPECIAL PRECAUTIONS \*\*\*

STORAGE AND HANDLING CONDITIONS-----

NFPA CLASS IIIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

## \*\*\* SECTION 10 - ADDITIONAL PRECAUTIONS AND LABELS \*\*\*

CAUTION! PROLONGED OR REPEATED CONTACT WITH USED MOTOR OIL MAY BE  
HARMFUL TO SKIN AND COULD CAUSE SKIN CANCER. PROMPTLY WASH AFFECTED  
AREA WITH SOAP AND WATER.

ORIGINAL

SUNFLEET DEXRON II\* \*\* INACTIVE MSDS PRINT \*\*

CODE R00000371401  
INACTIVE DATE: 11/16/1994

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1. CHEMICAL PRODUCT AND COMPANY INFORMATION

REVISION DATE: 02/10/1993  
UN NUMBER- N/A

PRIMARY APPLICATION- AUTOMATIC TRANSMISSION FLUID

MANUFACTURER- SUN COMPANY, INC.  
TEN PENN CENTER  
1801 MARKET STREET  
PHILADELPHIA PA 19103-1699

SYNONYMS.....: AUTOMATIC TRANSMISSION FLUID  
CAS REGISTRY NO: SEE SEC. 2  
CAS NAME.....: NO CLASSIFICATION - MIXTURE  
CHEMICAL FAMILY: BLEND  
INFORMATION

SUPPLIER... JOANNE HOUCK  
PHONE.....: (215) 977-6182

EMERGENCY PHONE NUMBERS (AFTER NORMAL BUSINESS HOURS)  
SUN CO.. 1-800-964-8861  
CHEMTREC. 1-800-424-9300

=====

2. COMPOSITION / INFORMATION ON INGREDIENTS

2. COMPOSITION / INFORMATION ON INGREDIENTS									
COMPONENT/CAS NO.	LO%	HI%	OSHA		EXPOSURE GUIDELINES		SUN/MFR		UNIT
			TWA	STEL	ACGIH	TWA	STEL	TWA	
-----									
LIMITS FOR THE PRODUCT:									
NO SPECIFIC LIMIT									
SEVERELY SOLVENT REFINED LIGHT PARAFFINIC PETROLEUM OIL									
64741-89-5	30.00	50.00	5		5				MG/M3
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL									
64741-88-4	40.00	60.00	5		5				MG/M3
BORATED POLYISOBUTENYL SUCCINIC ANHYDRIDE									
	.00	15.00							NO SPECIFIC LIMIT
SUBSTITUTED ALKYL PHOSPHITE									
	.00	15.00							NO SPECIFIC LIMIT
METHACRYLATE COPOLYMER									
	.00	15.00							NO SPECIFIC LIMIT

ADDITIONAL EXPOSURE LIMITS ----- GOVERNMENT REGULATION  
OTHER LIMIT- OIL MIST: 5 MG/M3 (OSHA PEL/ACGIH TLV)

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET DEXRON II\*

CODE R00000371401

INACTIVE DATE: 11/16/1994

## =====

## 3. HAZARDS IDENTIFICATION

## EMERGENCY OVERVIEW -----

DANGER! MAY CAUSE SKIN IRRITATION. HARMFUL OR FATAL IF SWALLOWED.  
PULMONARY ASPIRATION HAZARD-CAN ENTER LUNGS AND CAUSE DAMAGE.

APPEARANCE-- RED COLORED LIQUID            ODOR-- NO ODOR

## POTENTIAL HEALTH EFFECTS -----

PRIMARY ROUTES OF ENTRY- INHALATION( X ) SKIN( X ) EYE( ) INGESTION( )

## INHALATION -----

EXCESSIVE EXPOSURES MAY CAUSE IRRITATION TO EYES, NOSE, THROAT AND LUNGS.

## SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MAY CAUSE MODERATE IRRITATION WITH PROLONGED OR REPEATED CONTACT. REMOVES NATURAL OILS & FATS FROM SKIN.

## EYE -----

CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

## INGESTION -----

HARMFUL OR FATAL IF SWALLOWED. ESTIMATED ORAL LD50 IN RATS IS: > 15 G/KG. PULMONARY ASPIRATION HAZARD IF SWALLOWED AND/OR VOMITING OCCURS - CAN ENTER LUNGS AND CAUSE DAMAGE.

CARCINOGEN LISTED BY-IARC(NO)    NTP(NO)    OSHA(NO)    ACGIH(NO)    OTHER(NO)

PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE-

SKIN DISORDERS; RESPIRATORY, PULMONARY, AND LUNG DISORDERS (E.G. ASTHMA-LIKE CONDITIONS).

## =====

## 4. FIRST AID MEASURES

## INHALATION -----

MOVE PERSON TO FRESH AIR.

## SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. IF REDNESS OR SWELLING DEVELOPS, OBTAIN MEDICAL ASSISTANCE. WASH CLOTHING BEFORE REUSE.

## EYE -----

FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

## INGESTION -----

DO NOT INDUCE VOMITING! DO NOT GIVE LIQUIDS! OBTAIN EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET DEXRON II\*

CODE R00000371401

INACTIVE DATE: 11/16/1994

## =====

## 5. FIRE FIGHTING MEASURES

FLASH POINT: 350 MINIMUM COC (DEG. F); 177 MINIMUM COC (DEG. C)  
AUTOIGNITION TEMP.: ESTIMATED 650 (DEG. F); ESTIMATED 343 (DEG. C)

---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL): NOT DETERMINED % VOLUME

UPPER EXPLOSIVE LIMIT (UEL): NOT DETERMINED % VOLUME

FIRE AND EXPLOSION HAZARDS -----

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

EXTINGUISHING-MEDIA -----

WATER SPRAY. REGULAR FOAM. DRY CHEMICAL. CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS -----

WEAR SELF-CONTAINED BREATHING APPARATUS. WEAR STRUCTURAL FIREFIGHTERS  
PROTECTIVE CLOTHING.

NFPA/HMIS CLASSIFICATION

HEALTH - 0 / 0

FIRE - 1 / 1

REACTIVITY - 0 / 0

PERSONAL PROTECTION INDEX - X

HAZARD RATING

0=LEAST 1=SLIGHT

2=MODERATE 3=HIGH

4=EXTREME

SPECIFIC HAZARD: NONE KNOWN

## =====

## 6. ACCIDENTAL RELEASE MEASURES

CONTAIN SPILL. USE PERSONAL PROTECTIVE EQUIPMENT STATED IN SECTION 8.  
ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL. SHOVEL,  
SWEEP OR VACUUM SPILL.

## =====

## 7. HANDLING AND STORAGE

NFPA CLASS IIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

## =====

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

CONSULT WITH A HEALTH/SAFETY PROFESSIONAL FOR SPECIFIC SELECTION.

VENTILATION -----

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT. MECHANICAL  
VENTILATION RECOMMENDED.

PERSONAL PROTECTIVE EQUIPMENT -----

EYE -----



\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET DEXRON II\*

CODE R00000371401

INACTIVE DATE: 11/16/1994

SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF PRODUCT.

## GLOVES -----

PROTECTIVE GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED. THE FOLLOWING GLOVE MATERIALS ARE ACCEPTABLE: POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE; POLYVINYL ALCOHOL; VITON;

## RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. HALF-MASK AIR PURIFYING RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS ACCEPTABLE TO 10 TIMES THE EXPOSURE LIMIT. FULL-FACE AIR PURIFYING RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS ACCEPTABLE TO 50 TIMES THE EXPOSURE LIMIT. PROTECTION BY AIR PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR OR SCBA FOR EXPOSURES ABOVE 50X THE EXPOSURE LIMIT. IF EXPOSURE IS ABOVE IDLH (IMMEDIATELY DANGEROUS TO LIFE & HEALTH) OR THERE IS THE POSSIBILITY OF AN UNCONTROLLED RELEASE OR EXPOSURE LEVELS ARE UNKNOWN THEN USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR WITH ESCAPE BOTTLE OR SCBA.

## OTHER -----

IF CONTACT IS UNAVOIDABLE, WEAR CHEMICAL RESISTANT CLOTHING. THE FOLLOWING MATERIALS ARE ACCEPTABLE AS PROTECTIVE CLOTHING MATERIALS: POLYVINYL ALCOHOL (PVA); POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE; VITON; POLYURETHANE; LAUNDER SOILED CLOTHES.

## =====

## 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT.....: HIGH WITH (DEG. F) \_\_\_\_\_ WIDE RANGE (DEG. C)  
MELTING POINT.....: N/A (DEG. F) \_\_\_\_\_ N/A (DEG. C)  
SPECIFIC GRAVITY.....: 0.87 (WATER=1)  
PACKING DENSITY.....: N/A (KG/M3)  
VAPOR PRESSURE.....: < 0.0001 (MM HG @ 20 DEG C)  
VAPOR DENSITY.....: 10+ (AIR=1)  
SOLUBILITY IN WATER.: NIL (% BY VOLUME)  
PH INFORMATION.....: N/A AT CONC. N/A G/L H2O  
% VOLATILES BY VOL.: NIL  
EVAPORATION RATE....: 1000X SLOWER (ETHYL ETHER=1)  
OCTANOL/WATER COEFF.: N.D.  
APPEARANCE.....: RED COLORED LIQUID  
ODOR.....: NO ODOR  
ODOR THRESHOLD.....: N.D. (PPM)  
VISCOSITY.....: 50.6 SUS @ 210 DEG F ... 36.6 CST @ 40 DEG C  
MOLECULAR WEIGHT.....: N/A (G/MOLE)

ORIGINAL

SUNFLEET DEXRON II\* \*\* INACTIVE MSDS PRINT \*\*

CODE R00000371401  
INACTIVE DATE: 11/16/1994

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## 10. STABILITY AND REACTIVITY

STABILITY -----

STABLE.

INCOMPATIBLE MATERIALS -----

STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION -----

COMBUSTION WILL PRODUCE CARBON MONOXIDE AND OTHER ASPHYXIANTS

POLYMERIZATION -----

WILL NOT OCCUR.

=====

## 11. TOXICOLOGICAL INFORMATION

FOR THE PRODUCT -----

ACUTE TOXICITY

ESTIMATED LD50 IN RATS IS: > 15 GM/KG

INHALATION: LOW ACUTE TOXICITY. OVEREXPOSURE TO MIST MAY CAUSE EYE, NOSE, THROAT, RESPIRATORY TRACT IRRITATION. SKIN: PRACTICALLY NON-TOXIC IF ABSORBED. PROLONGED OR REPEATED CONTACT MAY CAUSE MODERATE IRRITATION. EYE: CONTACT MAY CAUSE MILD IRRITATION. ORAL: PRACTICALLY NON-TOXIC.

SEVERELY SOLVENT REFINED LIGHT PARAFFINIC PETROLEUM OIL (COMPONENT)

INHALATION: LOW ACUTE TOXICITY. OVEREXPOSURE TO MIST MAY CAUSE IRRITATION TO EYES, NOSE, THROAT, AND RESPIRATORY TRACT. SKIN: PRACTICALLY NON-TOXIC BY ABSORPTION. MAY CAUSE MODERATE IRRITATION WITH PROLONGED AND REPEATED CONTACT. EYE: MINIMALLY IRRITATING ON CONTACT. INGESTION: PRACTICALLY NON-TOXIC. HARMFUL OR FATAL IF SWALLOWED AND/OR VOMITING OCCURS BECAUSE IT CAN ENTER LUNGS AND CAUSE DAMAGE--PULMONARY ASPIRATION HAZARD.

SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL (COMPONENT)

INHALATION: LOW ACUTE TOXICITY. SKIN: PRACTICALLY NON-TOXIC BY ABSORPTION. MAY CAUSE MODERATE IRRITATION WITH PROLONGED AND REPEATED CONTACT. EYE: MINIMALLY IRRITATING ON CONTACT. INGESTION: PRACTICALLY NON-TOXIC IF SWALLOWED.

BORATED POLYISOBUTENYL SUCCINIC ANHYDRIDE (COMPONENT)

NO DATA AVAILABLE FOR ALL ROUTES OF EXPOSURE.

SUBSTITUTED ALKYL PHOSPHITE (COMPONENT)

NO DATA AVAILABLE FOR ALL ROUTES OF EXPOSURE.

METHACRYLATE COPOLYMER (COMPONENT)

INHALATION: NO EFFECTS EXPECTED. SKIN: PRACTICALLY NON-TOXIC IF ABSORBED; MINIMAL IRRITATION WITH PROLONGED AND REPEATED CONTACT. EYES: MINIMAL IRRITATION. ORAL: SLIGHTLY TOXIC.

SUNFLEET DEXRON II\*      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000371401  
INACTIVE DATE: 11/16/1994

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12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY -----

NO DATA AVAILABLE

=====

13. DISPOSAL CONSIDERATIONS

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. NOT A RCRA HAZARDOUS WASTE IF UNCONTAMINATED. IF "USED", RCRA CRITERIA (IGNITABILITY, REACTIVITY, CORROSIVITY, TOXICITY CHARACTERISTICS) MUST BE DETERMINED. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

=====

14. TRANSPORTATION INFORMATION

DOT-  
PROPER SHIPPING NAME- PETROLEUM LUBRICATING OIL  
HAZARD CLASS- NOT REGULATED  
IDENTIFICATION NUMBER- NOT REGULATED  
LABEL REQUIRED- NOT REGULATED

IMDG- PROPER SHIPPING NAME- NO DATA AVAILABLE

IATA- PROPER SHIPPING NAME- NO DATA AVAILABLE

=====

15. REGULATORY INFORMATION

SARA 302 THRESHOLD PLANNING QUANTITY. N/A

SARA 304 REPORTABLE QUANTITY ..... N/A

SARA 311 CATEGORIES- IMMEDIATE (ACUTE) HEALTH EFFECTS.. Y  
                          DELAYED (CHRONIC) HEALTH EFFECTS.. N  
                          FIRE HAZARD ..... N  
                          SUDDEN RELEASE OF PRESSURE HAZARD. N  
                          REACTIVITY HAZARD ..... N

WHEN A COMPONENT OF THIS PRODUCT IS LISTED BELOW, THE REGULATORY LIST ON WHICH IT APPEARS IS INDICATED.

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICALS.

SEVERELY SOLVENT REFINED LIGHT PARAFFINIC PETROLEUM OIL - NJ PA

ORIGINAL

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET DEXRON II\*

CODE R00000371401

INACTIVE DATE: 11/16/1994

04=OSHA CARCINOGEN	05=ACGIH CARCINOGEN	06=NTP CARCINOGEN
07=CERCLA 302.4	08=WHMIS CONTROLLED PROD.	
10=OTHER CARCINOGEN		
PA=PENNSYLVANIA RTK	NJ=NEW JERSEY RTK	CA=CALIFORNIA PROP 65
MA=MASSACHUSETTS RTK	MI=MICHIGAN 406	MN=MINNESOTA RTK
FL=FLORIDA	RI=RHODE ISLAND	IL=ILLINOIS
NY=NEW YORK	WV=WEST VIRGINIA	CT=CONNECTICUT
LA=LOUISIANA	ME=MAINE	OH=OHIO

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16. OTHER INFORMATION

WHMIS CLASSIFICATION: NOT CONTROLLED

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET TYPE F ATF

CODE R00000481402  
INACTIVE DATE: 05/05/1996

## =====

## 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

REVISION DATE: 09/08/1994  
UN NUMBER- N/A

PRIMARY APPLICATION- AUTOMATIC TRANSMISSION FLUID

MANUFACTURER- SUN COMPANY, INC.  
TEN PENN CENTER  
1801 MARKET STREET  
PHILADELPHIA PA 19103-1699SYNONYMS.....: AUTOMATIC TRANSMISSION FLUID  
CAS REGISTRY NO: SEE SEC. 2  
CAS NAME.....: NO CLASSIFICATION - MIXTURE  
CHEMICAL FAMILY: BLEND.  
INFORMATIONSUPPLIER... MARIA DAYRIT  
PHONE.....: (215) 246-8201EMERGENCY PHONE NUMBERS (AFTER NORMAL BUSINESS HOURS)  
SUN CO.. 1-800-964-8861  
CHEMTREC. 1-800-424-9300

## =====

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT/CAS NO.	LO%	HI%	OSHA		EXPOSURE GUIDELINES		ACGIH		SUN/MFR		UNIT
			TWA	STEL	TWA	STEL	TWA	STEL			
LIMITS FOR THE PRODUCT:											
NO SPECIFIC LIMIT											
SEVERELY SOLVENT REFINED LIGHT PARAFFINIC PETROLEUM OIL											
64741-89-5	40.00	65.00	5		5						MG/M3
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL											
64741-88-4	30.00	50.00	5		5						MG/M3
POLYMER OF STYRENE & MALEIC C4-C20 DIALKYL ESTERS											
68910-21-4	.00	5.00									
POLYISOBUTENYLSUCCINIC ANHYDRIDE											
67762-77-0	.00	10.00									
ZINC DIALKYL DITHIOPHOSPHATE											
68649-42-3	.00	10.00									
NO SPECIFIC LIMIT											

ADDITIONAL EXPOSURE LIMITS ----- GOVERNMENT REGULATION  
OTHER LIMIT- OIL MIST: 5 MG/M3 (OSHA PEL/ACGIH TLV)

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET TYPE F ATF

CODE R00000481402  
INACTIVE DATE: 05/05/1996

## =====

## 3. HAZARDS IDENTIFICATION

## EMERGENCY OVERVIEW -----

NOT EXPECTED TO CAUSE A SEVERE EMERGENCY HAZARD.

APPEARANCE-- RED FLUID            ODOR-- CHARACTERISTIC ODOR.

## POTENTIAL HEALTH EFFECTS -----

PRIMARY ROUTES OF ENTRY- INHALATION( ) SKIN( X ) EYE( ) INGESTION( )

## INHALATION -----

NO ACUTE EFFECTS EXPECTED.

## SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG). MAY  
CAUSE MILD IRRITATION WITH PROLONGED OR REPEATED CONTACT.

## EYE -----

CONTACT WITH THE EYE MAY CAUSE MILD IRRITATION.

## INGESTION -----

PRACTICALLY NON-TOXIC (LD50 &gt; 15G/KG).

CARCINOGEN LISTED BY-IARC(NO)   NTP(NO)   OSHA(NO)   ACGIH(NO)   OTHER(NO)

PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE-  
SKIN DISORDERS

## =====

## 4. FIRST AID MEASURES

## INHALATION -----

MOVE PERSON TO FRESH AIR.

## SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE  
REUSE.

## EYE -----

FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

## INGESTION -----

PRACTICALLY NON-TOXIC -- INDUCTION OF VOMITING NOT REQUIRED. OBTAIN  
EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER  
MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

SUNFLEET TYPE F ATF

\*\* INACTIVE MSDS PRINT \*\*

CODE R00000481402  
INACTIVE DATE: 05/05/1996

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5. FIRE FIGHTING MEASURES

FLASH POINT: 350 COC MINIMUM (DEG. F); 177 MINIMUM COC (DEG. C)  
AUTOIGNITION TEMP.: 675 ESTIMATED (DEG. F); 357 ESTIMATED (DEG. C)

---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL): NOT DETERMINED % VOLUME

UPPER EXPLOSIVE LIMIT (UEL): NOT DETERMINED % VOLUME

FIRE AND EXPLOSION HAZARDS -----

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

EXTINGUISHING-MEDIA -----

WATER SPRAY. REGULAR FOAM. DRY CHEMICAL. CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS -----

WEAR SELF-CONTAINED BREATHING APPARATUS. WEAR STRUCTURAL FIREFIGHTERS  
PROTECTIVE CLOTHING.

NFPA/HMIS CLASSIFICATION

HEALTH - 0 / 0

FIRE - 1 / 1

REACTIVITY - 0 / 0

PERSONAL PROTECTION INDEX - X

HAZARD RATING

0=LEAST 1=SLIGHT

2=MODERATE 3=HIGH

4=EXTREME

SPECIFIC HAZARD: NONE KNOWN

=====

6. ACCIDENTAL RELEASE MEASURES

CONTAIN SPILL. USE PERSONAL PROTECTIVE EQUIPMENT STATED IN SECTION 8.  
ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL. SHOVEL,  
SWEEP OR VACUUM SPILL.

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7. HANDLING AND STORAGE

NFPA CLASS IIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

=====

8. EXPOSURE CONTROL / PERSONAL PROTECTION

CONSULT WITH A HEALTH/SAFETY PROFESSIONAL FOR SPECIFIC SELECTION.

VENTILATION -----

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

PERSONAL PROTECTIVE EQUIPMENT -----

EYE -----

SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET TYPE F ATF

CODE R00000481402  
INACTIVE DATE: 05/05/1996

## PRODUCT.

## GLOVES -----

PROTECTIVE GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED. THE FOLLOWING GLOVE MATERIALS ARE ACCEPTABLE: POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE; POLYVINYL ALCOHOL; VITON;

## RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED. HALF-MASK AIR PURIFYING RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS ACCEPTABLE TO 10 TIMES THE EXPOSURE LIMIT. FULL-FACE AIR PURIFYING RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS ACCEPTABLE TO 50 TIMES THE EXPOSURE LIMIT. PROTECTION BY AIR PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR OR SCBA FOR EXPOSURES ABOVE 50X THE EXPOSURE LIMIT. IF EXPOSURE IS ABOVE IDLH (IMMEDIATELY DANGEROUS TO LIFE & HEALTH) OR THERE IS THE POSSIBILITY OF AN UNCONTROLLED RELEASE OR EXPOSURE LEVELS ARE UNKNOWN THEN USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR WITH ESCAPE BOTTLE OR SCBA.

## OTHER -----

IF CONTACT IS UNAVOIDABLE, WEAR CHEMICAL RESISTANT CLOTHING. THE FOLLOWING MATERIALS ARE ACCEPTABLE AS PROTECTIVE CLOTHING MATERIALS: POLYVINYL ALCOHOL (PVA); POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE; VITON; POLYURETHANE; LAUNDER SOILED CLOTHES.

## =====

## 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT.....: WIDE RANGE (DEG. F) \_\_\_\_\_ WIDE RANGE (DEG. C)  
MELTING POINT.....: N/A (DEG. F) \_\_\_\_\_ N/A (DEG. C)  
SPECIFIC GRAVITY.....: 0.87 (WATER=1) \_\_\_\_\_  
PACKING DENSITY.....: N/A (KG/M3)  
VAPOR PRESSURE.....: <0.0001 (MM HG @ 20 DEG C)  
VAPOR DENSITY.....: 8+ (AIR=1)  
SOLUBILITY IN WATER.: NIL (% BY VOLUME)  
PH INFORMATION.....: N/A AT CONC. N/A G/L H2O  
% VOLATILES BY VOL.: NIL  
EVAPORATION RATE.....: 1000X SLOWER (ETHYL ETHER=1)  
OCTANOL/WATER COEFF.: N.D.  
APPEARANCE.....: RED FLUID  
ODOR.....: CHARACTERISTIC ODOR.  
ODOR THRESHOLD.....: N.D. (PPM)  
VISCOSITY.....: N.D. SUS @ N/A DEG F ... 39.2 CST @ 40 DEG C  
MOLECULAR WEIGHT.....: N.D. (G/MOLE)



SUNFLEET TYPE F ATF      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000481402  
INACTIVE DATE: 05/05/1996

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## 10. STABILITY AND REACTIVITY

STABILITY -----  
STABLE.  
INCOMPATIBLE MATERIALS -----  
STRONG OXIDIZERS.  
HAZARDOUS DECOMPOSITION -----  
COMBUSTION MAY PRODUCE CARBON MONOXIDE AND OTHER ASPHYXIANTS  
POLYMERIZATION -----  
WILL NOT OCCUR.

=====

## 11. TOXICOLOGICAL INFORMATION

FOR THE PRODUCT -----  
INHALATION: LOW ACUTE TOXICITY. SKIN: PRACTICALLY NO-TOXIC IF ABSORBED  
MILD IRRITATION WITH PROLONGED OR REPEATED CONTACT. EYE: MILD  
IRRITATION. ORAL: PRACTICALLY NON-TOXIC.

SEVERELY SOLVENT REFINED LIGHT PARAFFINIC PETROLEUM OIL (COMPONENT)  
INHALATION: LOW ACUTE TOXICITY. OVEREXPOSURE TO MIST MAY CAUSE  
IRRITATION TO EYES, NOSE, THROAT, AND RESPIRATORY TRACT. SKIN:  
PRACTICALLY NON-TOXIC BY ABSORPTION. MAY CAUSE MODERATE IRRITATION  
WITH PROLONGED AND REPEATED CONTACT. EYE: MINIMALLY IRRITATING ON  
CONTACT. INGESTION: PRACTICALLY NON-TOXIC. HARMFUL OR FATAL IF  
SWALLOWED AND/OR VOMITING OCCURS BECAUSE IT CAN ENTER LUNGS AND CAUSE  
DAMAGE--PULMONARY ASPIRATION HAZARD.

SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL (COMPONENT)  
INHALATION: LOW ACUTE TOXICITY. SKIN: PRACTICALLY NON-TOXIC BY  
ABSORPTION. MAY CAUSE MODERATE IRRITATION WITH PROLONGED AND REPEATED  
CONTACT. EYE: MINIMALLY IRRITATING ON CONTACT. INGESTION: PRACTICALLY  
NON-TOXIC IF SWALLOWED.

POLYMER OF STYRENE & MALEIC C4-C20 DIALKYL ESTERS (COMPONENT)  
INHALATION: NO ACUTE EFFECTS EXPECTED. SKIN: PRACTICALLY NON-TOXIC IF  
ABSORBED; NO EFFECTS EXPECTED WITH PROLONGED AND REPEATED CONTACT.  
EYES: MINIMAL IRRITATION. ORAL: SLIGHTLY TOXIC.

POLYISOBUTENYLSUCCINIC ANHYDRIDE (COMPONENT)  
NO DATA AVAILABLE FOR ALL ROUTES OF EXPOSURE.

ZINC DIALKYL DITHIOPHOSPHATE (COMPONENT)  
INHALATION: TOXIC HYDROGEN SULFIDE IS GENERATED WHEN HEATED ABOVE 155  
DEG F. THIS CAN CAUSE RESPIRATORY COLLAPSE, COMA, & DEATH. SKIN:  
PROLONGED OR REPEATED CONTACT MAY CAUSE MODERATE IRRITATION, REDNESS,  
DRYING, CRACKING, DERMATITIS. EYE: IRRITANT. ORAL: HARMFUL IF  
SWALLOWED.

\*\* INACTIVE MSDS PRINT \*\*  
SUNFLEET TYPE F ATF

CODE R00000481402  
INACTIVE DATE: 05/05/1996

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12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY -----

NO DATA AVAILABLE

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13. DISPOSAL CONSIDERATIONS

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/  
STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

=====

14. TRANSPORTATION INFORMATION

DOT-

PROPER SHIPPING NAME- PETROLEUM LUBRICATING OIL

HAZARD CLASS- NOT REGULATED

IDENTIFICATION NUMBER- NOT REGULATED

LABEL REQUIRED- NOT REGULATED

IMDG- PROPER SHIPPING NAME- NO DATA AVAILABLE

IATA- PROPER SHIPPING NAME- NO DATA AVAILABLE

=====

15. REGULATORY INFORMATION

SARA 302 THRESHOLD PLANNING QUANTITY. N/A

SARA 304 REPORTABLE QUANTITY ..... N/A

SARA 311 CATEGORIES- IMMEDIATE (ACUTE) HEALTH EFFECTS.. N  
                          DELAYED (CHRONIC) HEALTH EFFECTS.. N  
                          FIRE HAZARD ..... N  
                          SUDDEN RELEASE OF PRESSURE HAZARD. N  
                          REACTIVITY HAZARD ..... N

WHEN A PRODUCT AND/OR COMPONENT IS LISTED BELOW, THE REGULATORY  
LIST ON WHICH IT APPEARS IS INDICATED.

SEVERELY SOLVENT REFINED LIGHT PARAFFINIC PETROLEUM OIL - NJ PA  
ZINC DIALKYL DITHIOPHOSPHATE - NJ 01

01=SARA 313

04=OSHA CARCINOGEN

07=CERCLA 302.4

10=OTHER CARCINOGEN

PA=PENNSYLVANIA RTK

MA=MASSACHUSETTS RTK

02=SARA 302/304

05=ACGIH CARCINOGEN

08=WHMIS CONTROLLED PROD.

NJ=NEW JERSEY RTK

MI=MICHIGAN 406

03=IARC CARCINOGEN

06=NTP CARCINOGEN

CA=CALIFORNIA PROP 65

MN=MINNESOTA RTK

ORIGINAL

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET GL5 80W-90

CODE R00000110402

INACTIVE DATE: 04/23/1997

## =====

## 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

REVISION DATE: 03/24/1995

UN NUMBER- N/A

PRIMARY APPLICATION- GEAR LUBRICANT

MANUFACTURER- SUN COMPANY, INC.  
 TEN PENN CENTER  
 1801 MARKET STREET  
 PHILADELPHIA PA 19103-1699

SYNONYMS.....: GEAR LUBE  
 CAS REGISTRY NO: SEE SEC. 2  
 CAS NAME.....: NO CLASSIFICATION - BLENDED PRODUCT  
 CHEMICAL FAMILY: MIXTURE  
 INFORMATION  
 SUPPLIER... MARIA DAYRIT  
 PHONE.....: (215) 246-8201

EMERGENCY PHONE NUMBERS (AFTER NORMAL BUSINESS HOURS)  
 SUN CO.. 1-800-964-8861  
 CHEMTREC. 1-800-424-9300

## =====

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT/CAS NO.	LO%	HI%	OSHA		EXPOSURE GUIDELINES ACGIH		SUN/MFR		UNIT
			TWA	STEL	TWA	STEL	TWA	STEL	
-----									
LIMITS FOR THE PRODUCT:									
			5		5				MG/M3
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL									
64741-88-4	20.00	50.00	5		5				MG/M3
SEVERELY SOLVENT REFINED RESIDUUM									
64742-01-4	.00	70.00	5		5				MG/M3
ALKYLAMINE SALT OF DITHIOPHOSPHORIC ACID									
71888-91-0	2.00	2.00			NO SPECIFIC LIMIT				
ACRYLIC COPOLYMER									
68171-46-0	.00	1.00			NO SPECIFIC LIMIT				
SULFURIZED 2-METHYL-1-PROPENE									
68511-50-2	.00	5.00			NO SPECIFIC LIMIT				
TERT-BUTYL SULFIDE									
107-47-1	.00	1.00			NO SPECIFIC LIMIT				
SUBSTITUTED THIADIAZOLE									
73984-93-7	.00	1.00			NO SPECIFIC LIMIT				
POLYOLEFIN AMIDE ALKENEAMINE									
84605-20-9	.00	5.00			NO SPECIFIC LIMIT				
2-PROPENOIC ACID, ETHYL ESTER, POLYMER WITH 2-ETHYLHEXYL									
26376-86-3	.00	1.00			NO SPECIFIC LIMIT				

ADDITIONAL EXPOSURE LIMITS ----- GOVERNMENT REGULATION  
 OTHER LIMIT- OIL MIST: 5 MG/M3 OSHA PEL/ACGIH TLV

ORIGINAL

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET GL5 80W-90

CODE R00000110402  
INACTIVE DATE: 04/23/1997

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### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW -----

NOT EXPECTED TO CAUSE A SEVERE EMERGENCY HAZARD.

APPEARANCE-- DARK AMBER LIQUID            ODOR-- SLIGHT ODOR.

#### POTENTIAL HEALTH EFFECTS -----

PRIMARY ROUTES OF ENTRY- INHALATION( ) SKIN( X ) EYE( ) INGESTION( )

#### INHALATION -----

NO ACUTE EFFECTS EXPECTED.

#### SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG).  
MINIMAL IRRITATION WITH PROLONGED OR REPEATED CONTACT.

#### EYE -----

CONTACT WITH THE EYE MAY CAUSE MINIMAL IRRITATION.

#### INGESTION -----

PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

CARCINOGEN LISTED BY-IARC(NO)    NTP(NO)    OSHA(NO)    ACGIH(NO)    OTHER(NO)

PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE-  
SKIN DISORDERS; RESPIRATORY, PULMONARY AND LUNG DISORDERS (E.G.  
ASTHMA-LIKE CONDITIONS).

=====

### 4. FIRST AID MEASURES

#### INHALATION -----

MOVE PERSON TO FRESH AIR.

#### SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE  
REUSE.

#### EYE -----

FLUSH WITH WATER.

#### INGESTION -----

PRACTICALLY NON-TOXIC -- INDUCTION OF VOMITING NOT REQUIRED. OBTAIN  
EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER  
MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET GL5 80W-90

CODE R00000110402  
INACTIVE DATE: 04/23/1997

## =====

## 5. FIRE FIGHTING MEASURES

FLASH POINT: 356 MINIMUM COC (DEG. F); 180 MINIMUM COC (DEG. C)  
AUTOIGNITION TEMP.: 695 ESTIMATED (DEG. F); 368 ESTIMATED (DEG. C)

---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL): NOT DETERMINED % VOLUME

UPPER EXPLOSIVE LIMIT (UEL): NOT DETERMINED % VOLUME

FIRE AND EXPLOSION HAZARDS -----

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

EXTINGUISHING-MEDIA -----

WATER SPRAY. REGULAR FOAM. DRY CHEMICAL. CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS -----

WEAR SELF-CONTAINED BREATHING APPARATUS. WEAR STRUCTURAL FIREFIGHTERS  
PROTECTIVE CLOTHING.

NFPA/HMIS CLASSIFICATION

HEALTH - 0 / 0

FIRE - 1 / 1

REACTIVITY - 0 / 0

PERSONAL PROTECTION INDEX - X

HAZARD RATING

0=LEAST 1=SLIGHT

2=MODERATE 3=HIGH

4=EXTREME

SPECIFIC HAZARD: NONE KNOWN

## =====

## 6. ACCIDENTAL RELEASE MEASURES

CONTAIN SPILL. USE PERSONAL PROTECTIVE EQUIPMENT STATED IN SECTION 8.  
ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL. SHOVEL,  
SWEEP OR VACUUM SPILL.

## =====

## 7. HANDLING AND STORAGE

NFPA CLASS IIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

## =====

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

CONSULT WITH A HEALTH/SAFETY PROFESSIONAL FOR SPECIFIC SELECTION.

VENTILATION -----

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT. GENERAL DILUTION  
VENTILATION ACCEPTABLE.

PERSONAL PROTECTIVE EQUIPMENT -----

EYE -----

## \*\* INACTIVE MSDS PRINT \*\*

SUNFLEET GL5 80W-90

CODE R00000110402  
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SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF PRODUCT.

## GLOVES -----

PROTECTIVE GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED. THE FOLLOWING GLOVE MATERIALS ARE ACCEPTABLE: POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE; POLYVINYL ALCOHOL; VITON;

## RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED. HALF-MASK AIR PURIFYING RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS ACCEPTABLE TO 10 TIMES THE EXPOSURE LIMIT. FULL-FACE AIR PURIFYING RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS ACCEPTABLE TO 50 TIMES THE EXPOSURE LIMIT. PROTECTION BY AIR PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR OR SCBA FOR EXPOSURES ABOVE 50X THE EXPOSURE LIMIT. IF EXPOSURE IS ABOVE IDLH (IMMEDIATELY DANGEROUS TO LIFE & HEALTH) OR THERE IS THE POSSIBILITY OF AN UNCONTROLLED RELEASE OR EXPOSURE LEVELS ARE UNKNOWN THEN USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR WITH ESCAPE BOTTLE OR SCBA.

## OTHER -----

IF CONTACT IS UNAVOIDABLE, WEAR CHEMICAL RESISTANT CLOTHING. THE FOLLOWING MATERIALS ARE ACCEPTABLE AS PROTECTIVE CLOTHING MATERIALS: POLYVINYL ALCOHOL (PVA); POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE; VITON; POLYURETHANE; LAUNDER SOILED CLOTHES.

## =====

## 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT.....: HIGH WITH (DEG. F) \_\_\_\_\_ WIDE RANGE (DEG. C)  
MELTING POINT.....: N/A (DEG. F) \_\_\_\_\_ N/A (DEG. C)  
SPECIFIC GRAVITY.....: 0.88 (WATER=1)  
PACKING DENSITY.....: N/A (KG/M3)  
VAPOR PRESSURE.....: < 0.0001 (MM HG @ 20 DEG C)  
VAPOR DENSITY.....: 10+ (AIR=1)  
SOLUBILITY IN WATER.: NIL (% BY VOLUME)  
PH INFORMATION.....: N/A AT CONC. N/A G/L H2O  
% VOLATILES BY VOL.: NIL  
EVAPORATION RATE....: 1000X SLOWER (ETHYL ETHER=1)  
OCTANOL/WATER COEFF.: N.D.  
APPEARANCE.....: DARK AMBER LIQUID  
ODOR.....: SLIGHT ODOR.  
ODOR THRESHOLD.....: N.D. (PPM)  
VISCOSITY.....: N.D. SUS @ N.D DEG F ... 144 CST @ 40 DEG C  
MOLECULAR WEIGHT....: N/A (G/MOLE)

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET GL5 80W-90

CODE R00000110402  
INACTIVE DATE: 04/23/1997

## =====

## 10. STABILITY AND REACTIVITY

STABILITY -----  
STABLE.  
INCOMPATIBLE MATERIALS -----  
STRONG OXIDIZERS  
HAZARDOUS DECOMPOSITION -----  
COMBUSTION WILL PRODUCE CARBON MONOXIDE AND ASPHYXIANTS  
POLYMERIZATION -----  
WILL NOT OCCUR.

## =====

## 11. TOXICOLOGICAL INFORMATION

FOR THE PRODUCT -----  
INHALATION: LOW ACUTE TOXICITY. SKIN: PRACTICALLY NON-TOXIC IF  
ABSORBED. MINIMAL IRRITATION WITH PROLONGED OR REPEATED CONTACT. EYE:  
MINIMALLY IRRITATING ON CONTACT. ORAL: PRACTICALLY NON-TOXIC.

SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL (COMPONENT)  
INHALATION: LOW ACUTE TOXICITY. SKIN: PRACTICALLY NON-TOXIC BY  
ABSORPTION. MAY CAUSE MODERATE IRRITATION WITH PROLONGED AND REPEATED  
CONTACT. EYE: MINIMALLY IRRITATING ON CONTACT. INGESTION: PRACTICALLY  
NON-TOXIC IF SWALLOWED.

SEVERELY SOLVENT REFINED RESIDUUM (COMPONENT)  
INHALATION: LOW ACUTE TOXICITY EXPECTED. SKIN: PRACTICALLY NON-TOXIC  
BY ABSORPTION. MAY CAUSE MINIMAL IRRITATION WITH PROLONGED AND  
REPEATED CONTACT. EYE: MINIMALLY IRRITATING ON CONTACT. INGESTION:  
PRACTICALLY NON-TOXIC IF SWALLOWED.

ALKYLAMINE SALT OF DITHIOPHOSPHORIC ACID (COMPONENT)  
NO DATA AVAILABLE FOR ANY ROUTE OF EXPOSURE. SOME SALTS RELEASE TOXIC  
HYDROGEN SULFIDE VAPORS WHEN HEATED. THIS CAN CAUSE RESPIRATORY  
PARALYSIS AND DEATH.

ACRYLIC COPOLYMER (COMPONENT)  
NO DATA AVAILABLE FOR ANY ROUTE OF EXPOSURE. NO ACUTE TOXIC EFFECTS  
EXPECTED.

SULFURIZED 2-METHYL-1-PROPENE (COMPONENT)  
INHALATION: TOXIC VAPORS MAY EVOLVE FROM HEATING. SKIN: MINIMAL  
IRRITATION. NO DATA FOR ABSORPTION. EYE: NON-IRRITATING. ORAL: LOW  
ACUTE TOXICITY.

TERT-BUTYL SULFIDE (COMPONENT)  
NO DATA AVAILABLE FOR ANY ROUTE OF EXPOSURE.

SUBSTITUTED THIADIAZOLE (COMPONENT)  
NO DATA AVAILABLE FOR ANY ROUTE OF EXPOSURE.

POLYOLEFIN AMIDE ALKENEAMINE (COMPONENT)

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET GL5 80W-90

CODE R00000110402  
INACTIVE DATE: 04/23/1997

NO DATA AVAILABLE FOR ANY ROUTE OF EXPOSURE.

2-PROPENOIC ACID, ETHYL ESTER, POLYMER WITH 2-ETHYLHEXYL (COMPONENT)  
INHALATION: NO ACUTE EFFECTS EXPECTED. SKIN: PRACTICALLY NON-TOXIC  
IF ABSORBED. PRACTICALLY NON-IRRITATING. EYE: CONTACT MAY CAUSE MILD  
IRRITATION. ORAL: PRACTICALLY NON-TOXIC IF SWALLOWED.

## =====

## 12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY -----

NO DATA AVAILABLE

## =====

## 13. DISPOSAL CONSIDERATIONS

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. IF "USED", RCRA CRITERIA  
(IGNITABILITY, REACTIVITY, CORROSIVITY, TOXICITY CHARACTERISTICS) MUST  
BE DETERMINED. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO  
AUTHORIZED DISPOSAL SERVICE.

## =====

## 14. TRANSPORTATION INFORMATION

DOT-

PROPER SHIPPING NAME- PETROLEUM LUBRICATING OIL

HAZARD CLASS- NOT REGULATED

IDENTIFICATION NUMBER- NOT REGULATED

LABEL REQUIRED- NOT REGULATED

IMDG- PROPER SHIPPING NAME- NO DATA AVAILABLE

IATA- PROPER SHIPPING NAME- NO DATA AVAILABLE

## =====

## 15. REGULATORY INFORMATION

SARA 302 THRESHOLD PLANNING QUANTITY. N/A

SARA 304 REPORTABLE QUANTITY ..... N/A

SARA 311 CATEGORIES- IMMEDIATE (ACUTE) HEALTH EFFECTS.. N  
                          DELAYED (CHRONIC) HEALTH EFFECTS.. N  
                          FIRE HAZARD ..... N  
                          SUDDEN RELEASE OF PRESSURE HAZARD. N  
                          REACTIVITY HAZARD ..... N

WHEN A PRODUCT AND/OR COMPONENT IS LISTED BELOW, THE REGULATORY  
LIST ON WHICH IT APPEARS IS INDICATED.

THIS PRODUCT OR ALL COMPONENTS OF THIS PRODUCT ARE LISTED



ORIGINAL

\*\* INACTIVE MSDS PRINT \*\*

SUNFLEET GL5 80W-90

CODE R00000110402

INACTIVE DATE: 04/23/1997

---

ON THE U.S. TSCA INVENTORY.

=====

16. OTHER INFORMATION

WHMIS CLASSIFICATION: NOT CONTROLLED ELEMENTAL ANALYSIS: 1.7% SULFUR;  
0.1% PHOSPHORUS

ORIGINAL

\*\* INACTIVE MSDS PRINT \*\*  
SUNFLEET GL5 85W-140CODE R00000110602  
INACTIVE DATE: 04/23/1997

## =====

## 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

REVISION DATE: 03/24/1995  
UN NUMBER- N/A

PRIMARY APPLICATION- GEAR LUBRICANT

MANUFACTURER- SUN COMPANY, INC.  
TEN PENN CENTER  
1801 MARKET STREET  
PHILADELPHIA PA 19103-1699SYNONYMS.....: GEAR LUBE  
CAS REGISTRY NO: SEE SEC. 2  
CAS NAME.....: NO CLASSIFICATION - MIXTURE  
CHEMICAL FAMILY: BLEND  
INFORMATIONSUPPLIER... MARIA DAYRIT  
PHONE.....: (215) 246-8201EMERGENCY PHONE NUMBERS (AFTER NORMAL BUSINESS HOURS)  
SUN CO.. 1-800-964-8861  
CHEMTREC. 1-800-424-9300

## =====

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT/CAS NO.	LO%	HI%	OSHA		EXPOSURE GUIDELINES		SUN/MFR		UNIT
			TWA	STEL	ACGIH	STEL	TWA	STEL	

LIMITS FOR THE PRODUCT:

NO SPECIFIC LIMIT

SEVERELY SOLVENT REFINED RESIDUUM									
64742-01-4	.00	95.00	5		5				MG/M3
OLEFIN SULFIDE									
72162-26-6	.00	5.00							
POLYBUTENYL SUCCINIMIDE/AMIDE BORATE									
84605-20-9	.00	5.00							
ALKYLAMINE SALT OF DITHIOPHOSPHORIC ACID									
71888-91-0	.00	5.00							
ACRYLIC COPOLYMER									
68171-46-0	.00	1.00							

ADDITIONAL EXPOSURE LIMITS ----- GOVERNMENT REGULATION  
OTHER LIMIT- OIL MIST: 5 MG/M3 OSHA PEL/ACGIH TLV

ORIGINAL

SUNFLEET GL5 85W-140      \*\* INACTIVE MSDS PRINT \*\*

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### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW -----

NOT EXPECTED TO CAUSE A SEVERE EMERGENCY HAZARD.

APPEARANCE-- DARK VISCOUS FLUID.      ODOR-- SLIGHT ODOR.

#### POTENTIAL HEALTH EFFECTS -----

PRIMARY ROUTES OF ENTRY- INHALATION( ) SKIN( X ) EYE( ) INGESTION( )

#### INHALATION -----

NO ACUTE EFFECTS EXPECTED.

#### SKIN -----

PRACTICALLY NON-TOXIC IF ABSORBED (LD50 GREATER THAN 2000 MG/KG).  
MINIMAL IRRITATION WITH PROLONGED OR REPEATED CONTACT. ESTIMATED DERMAL  
LD50 IN RABBITS IS: > 5,000 MG/KG.

#### EYE -----

CONTACT WITH THE EYE MAY CAUSE MINIMAL IRRITATION.

#### INGESTION -----

PRACTICALLY NON-TOXIC (LD50 > 15G/KG).

CARCINOGEN LISTED BY-IARC(NO)    NTP(NO)    OSHA(NO)    ACGIH(NO)    OTHER(NO)

PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE-  
SKIN DISORDERS; RESPIRATORY, PULMONARY AND LUNG DISORDERS (E.G.  
ASTHMA-LIKE CONDITIONS).

=====

### 4. FIRST AID MEASURES

#### INHALATION -----

MOVE PERSON TO FRESH AIR.

#### SKIN -----

WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE  
REUSE.

#### EYE -----

FLUSH WITH WATER. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.

#### INGESTION -----

PRACTICALLY NON-TOXIC -- INDUCTION OF VOMITING NOT REQUIRED. OBTAIN  
EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER  
MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

\*\* INACTIVE MSDS PRINT \*\*  
SUNFLEET GL5 85W-140

CODE R00000110602  
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## 5. FIRE FIGHTING MEASURES

FLASH POINT: 375 MINIMUM COC (DEG. F); 192 MINIMUM COC (DEG. C)  
AUTOIGNITION TEMP.: 750 ESTIMATED (DEG. F); 398 ESTIMATED (DEG. C)

---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL): NOT DETERMINED % VOLUME

UPPER EXPLOSIVE LIMIT (UEL): NOT DETERMINED % VOLUME

FIRE AND EXPLOSION HAZARDS -----

CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).

EXTINGUISHING-MEDIA -----

WATER SPRAY. REGULAR FOAM. DRY CHEMICAL. CARBON DIOXIDE.

SPECIAL FIRE FIGHTING INSTRUCTIONS -----

WEAR SELF-CONTAINED BREATHING APPARATUS. WEAR STRUCTURAL FIREFIGHTERS  
PROTECTIVE CLOTHING.

NFPA/HMIS CLASSIFICATION

HEALTH - 0 / 0

FIRE - 1 / 1

REACTIVITY - 0 / 0

PERSONAL PROTECTION INDEX - X

HAZARD RATING

0=LEAST 1=SLIGHT

2=MODERATE 3=HIGH

4=EXTREME

SPECIFIC HAZARD: NONE KNOWN

=====

## 6. ACCIDENTAL RELEASE MEASURES

CONTAIN SPILL. USE PERSONAL PROTECTIVE EQUIPMENT STATED IN SECTION 8.  
ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL. SHOVEL,  
SWEEP OR VACUUM SPILL.

=====

## 7. HANDLING AND STORAGE

NFPA CLASS IIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

=====

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

CONSULT WITH A HEALTH/SAFETY PROFESSIONAL FOR SPECIFIC SELECTION.

VENTILATION -----

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT. GENERAL DILUTION  
VENTILATION ACCEPTABLE.

PERSONAL PROTECTIVE EQUIPMENT -----

EYE -----

\*\* INACTIVE MSDS PRINT \*\*

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SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF PRODUCT.

## GLOVES -----

PROTECTIVE GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED. THE FOLLOWING GLOVE MATERIALS ARE ACCEPTABLE: POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE; POLYVINYL ALCOHOL; VITON;

## RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION. RESPIRATORY PROTECTION USUALLY NOT NEEDED UNLESS PRODUCT IS HEATED OR MISTED. HALF-MASK AIR PURIFYING RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS ACCEPTABLE TO 10 TIMES THE EXPOSURE LIMIT. FULL-FACE AIR PURIFYING RESPIRATOR WITH DUST/MIST FILTERS OR HEPA FILTER CARTRIDGES IS ACCEPTABLE TO 50 TIMES THE EXPOSURE LIMIT. PROTECTION BY AIR PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR OR SCBA FOR EXPOSURES ABOVE 50X THE EXPOSURE LIMIT. IF EXPOSURE IS ABOVE IDLH (IMMEDIATELY DANGEROUS TO LIFE & HEALTH) OR THERE IS THE POSSIBILITY OF AN UNCONTROLLED RELEASE OR EXPOSURE LEVELS ARE UNKNOWN THEN USE A POSITIVE PRESSURE-DEMAND FULL-FACE SUPPLIED AIR RESPIRATOR WITH ESCAPE BOTTLE OR SCBA.

## OTHER -----

IF CONTACT IS UNAVOIDABLE, WEAR CHEMICAL RESISTANT CLOTHING. THE FOLLOWING MATERIALS ARE ACCEPTABLE AS PROTECTIVE CLOTHING MATERIALS: POLYVINYL ALCOHOL (PVA); POLYVINYL CHLORIDE (PVC); NEOPRENE; NITRILE; VITON; POLYURETHANE; LAUNDER SOILED CLOTHES.

## =====

## 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT.....: HIGH WITH (DEG. F) \_\_\_\_\_ WIDE RANGE (DEG. C)  
MELTING POINT.....: N/A (DEG. F) \_\_\_\_\_ N/A (DEG. C)  
SPECIFIC GRAVITY.....: 0.89 (WATER=1)  
PACKING DENSITY.....: N/A (KG/M3)  
VAPOR PRESSURE.....: < 0.0001 (MM HG @ 20 DEG C)  
VAPOR DENSITY.....: 15+ (AIR=1)  
SOLUBILITY IN WATER.: NIL (% BY VOLUME)  
PH INFORMATION.....: N/A AT CONC. N/A G/L H2O  
% VOLATILES BY VOL.: NIL  
EVAPORATION RATE.....: 1000X SLOWER (ETHYL ETHER=1)  
OCTANOL/WATER COEFF.: N.D.  
APPEARANCE.....: DARK VISCOUS FLUID.  
ODOR.....: SLIGHT ODOR.  
ODOR THRESHOLD.....: N.D. (PPM)  
VISCOSITY.....: N.D. SUS @ N.D DEG F ... 337 CST @ 40 DEG C  
MOLECULAR WEIGHT.....: N/A (G/MOLE)

SUNFLEET GL5 85W-140      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000110602  
INACTIVE DATE: 04/23/1997

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10. STABILITY AND REACTIVITY

STABILITY -----  
STABLE.  
INCOMPATIBLE MATERIALS -----  
STRONG OXIDIZERS  
HAZARDOUS DECOMPOSITION -----  
COMBUSTION WILL PRODUCE CARBON MONOXIDE AND ASPHYXIANTS  
POLYMERIZATION -----  
WILL NOT OCCUR.

=====

11. TOXICOLOGICAL INFORMATION

FOR THE PRODUCT -----

ACUTE TOXICITY

ESTIMATED DERMAL LD50 IN RABBITS IS: > 5,000 MG/KG.

INHALATION: LOW ACUTE TOXICITY. SKIN: PRACTICALLY NON-TOXIC IF  
ABSORBED. MINIMAL IRRITATION WITH PROLONGED OR REPEATED CONTACT. EYE:  
MINIMALLY IRRITATING ON CONTACT. ORAL: PRACTICALLY NON-TOXIC.

SEVERELY SOLVENT REFINED RESIDUUM (COMPONENT)

INHALATION: LOW ACUTE TOXICITY EXPECTED. SKIN: PRACTICALLY NON-TOXIC  
BY ABSORPTION. MAY CAUSE MINIMAL IRRITATION WITH PROLONGED AND  
REPEATED CONTACT. EYE: MINIMALLY IRRITATING ON CONTACT. INGESTION:  
PRACTICALLY NON-TOXIC IF SWALLOWED.

OLEFIN SULFIDE (COMPONENT)

NO DATA AVAILABLE FOR ANY ROUTE OF EXPOSURE.

POLYBUTENYL SUCCINIMIDE/AMIDE BORATE (COMPONENT)

NO DATA AVAILABLE FOR ALL ROUTES OF EXPOSURE.

ALKYLAMINE SALT OF DITHIOPHOSPHORIC ACID (COMPONENT)

NO DATA AVAILABLE FOR ANY ROUTE OF EXPOSURE. SOME SALTS RELEASE TOXIC  
HYDROGEN SULFIDE VAPORS WHEN HEATED. THIS CAN CAUSE RESPIRATORY  
PARALYSIS AND DEATH.

ACRYLIC COPOLYMER (COMPONENT)

NO DATA AVAILABLE FOR ANY ROUTE OF EXPOSURE. NO ACUTE TOXIC EFFECTS  
EXPECTED.

ORIGINAL

SUNFLEET GL5 85W-140      \*\* INACTIVE MSDS PRINT \*\*

CODE R00000110602  
INACTIVE DATE: 04/23/1997

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12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY -----

NO DATA AVAILABLE

=====

13. DISPOSAL CONSIDERATIONS

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. IF "USED", RCRA CRITERIA (IGNITABILITY, REACTIVITY, CORROSIVITY, TOXICITY CHARACTERISTICS) MUST BE DETERMINED. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

=====

14. TRANSPORTATION INFORMATION

DOT-

PROPER SHIPPING NAME- PETROLEUM LUBRICATING OIL

HAZARD CLASS- NOT REGULATED

IDENTIFICATION NUMBER- NOT REGULATED

LABEL REQUIRED- NOT REGULATED

IMDG- PROPER SHIPPING NAME- NO DATA AVAILABLE

IATA- PROPER SHIPPING NAME- NO DATA AVAILABLE

=====

15. REGULATORY INFORMATION

SARA 302 THRESHOLD PLANNING QUANTITY. N/A

SARA 304 REPORTABLE QUANTITY ..... N/A

SARA 311 CATEGORIES- IMMEDIATE (ACUTE) HEALTH EFFECTS.. N  
                          DELAYED (CHRONIC) HEALTH EFFECTS.. N  
                          FIRE HAZARD ..... N  
                          SUDDEN RELEASE OF PRESSURE HAZARD. N  
                          REACTIVITY HAZARD ..... N

WHEN A PRODUCT AND/OR COMPONENT IS LISTED BELOW, THE REGULATORY LIST ON WHICH IT APPEARS IS INDICATED.

THIS PRODUCT OR ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE U.S. TSCA INVENTORY.

ORIGINAL

\*\* INACTIVE MSDS PRINT \*\*

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CODE R00000110602

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16. OTHER INFORMATION

WHMIS CLASSIFICATION: NOT CONTROLLED



## \*\* INACTIVE MSDS PRINT \*\*

STR MINERAL GEAR OIL 140

CODE R00000113411

INACTIVE DATE: 03/18/1992

## \*\*\* SECTION 1 - IDENTIFICATION \*\*\*

M.S.D.S DATE: 01/24/91

INACTIVE DATE: 03/18/92

UN/NA NUMBER:

## MANUFACTURER....:

SUN REFINING AND MARKETING COMPANY  
TEN PENN CENTER  
1801 MARKET STREET  
PHILADELPHIA PA 19103-1699

SYNONYMS.....: LUBE OIL ADDITIVE

CAS REGISTRY NO: SEE SEC. 2

CAS NAME.....: NO CLASSIFICATION - MIXTURE

CHEMICAL-FAMILY: BLEND

## INFORMATION:

SUPPLIER....: JOANNE HOUCK

PHONE.....: 215-977-6133

AFTER HOURS: 215-293-9270

## \*\*\* SECTION 2 - INGREDIENTS \*\*\*

CONTAINS 7.5% ZINC DIALKYL DITHIOPHOSPHATE, CAS\* 68649-42-3 AND 90%  
HIGHLY REFINED BASE OILS.

'INGREDIENTS WITH \* IN CAS NUMBER ARE SUBJECT TO REPORTING REQUIREMENTS OF  
SECTION 313 EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW AND 40CFR372'

## \*\*\* SECTION 3 - PHYSICAL DATA \*\*\*

BOILING POINT.....: HIGH WITH (DEG. F) WIDE RANGE (DEG. C)  
MELTING POINT.....: N/A (DEG. F) N/A (DEG. C)  
SPECIFIC GRAVITY....: 0.94 (H2O=1)  
PACKING DENSITY.....: N/A (KG/M3)  
VAPOR PRESSURE.....: NEGLIGIBLE (MM HG AT 20C)  
VAPOR DENSITY.....: N.D. (AIR=1)  
SOLUBILITY IN WATER.: NEGLIGIBLE (% BY VOL)  
PH INFORMATION.....: N.D. AT CONC. G/L H2O  
% VOLATILES BY VOL..: NIL  
EVAPORATION RATE....: NEGLIGIBLE (ETHYL ETHER=1)  
OCTANOL/WATER COEFF.: N.D.  
APPEARANCE.....: DARK COLORED LIQUID  
ODOR.....: N.D.  
ODOR THRESHOLD.....: N.D. (PPM)

## \*\*\* SECTION 4 - FIRE AND EXPLOSION DATA \*\*\*

FLASH POINT 370 TYPICAL COC (DEG. F) 188 TYPICAL COC (DEG. C)  
AUTOIGNITION TEMP. NOT DETERMINED (DEG. F) NOT DETERMINED (DEG. C)

## ---NFPA CLASSIFICATION--- -----HAZARD RATING-----

HEALTH	- 1	0 - LEAST	3 - HIGH
FIRE	- 1	1 - SLIGHT	4 - EXTREME
REACTIVITY	0	2 - MODERATE	

## SPECIFIC HAZARD

## ---FLAMMABLE LIMITS IN AIR---

LOWER EXPLOSIVE LIMIT (LEL) NOT DETERMINED % VOL.

\*\* INACTIVE MSDS PRINT \*\*

STR MINERAL GEAR OIL 140

CODE R00000113411

INACTIVE DATE: 03/18/1992

UPPER EXPLOSIVE LIMIT (UEL) NOT DETERMINED % VOL.  
FIRE AND EXPLOSION HAZARDS -----  
CAN BE MADE TO BURN (FLASH POINT GREATER THAN 200F).  
EXTINGUISHING MEDIA -----  
WATER FOG. MECHANICAL FOAM. DRY CHEMICAL POWDER. CARBON DIOXIDE.  
SPECIAL FIRE FIGHTING INSTRUCTIONS----  
WEAR SELF-CONTAINED BREATHING APPARATUS WHEN FIRE FIGHTING IN CONFINED SPACE.

## \*\*\* SECTION 5 - HEALTH HAZARD INFORMATION \*\*\*

EXPOSURE LIMITS----- GOVERNMENT REGULATION  
OTHER LIMIT: OIL MIST: 5 MG/M3 (OSHA PEL/ACGIH TLV)  
\*\*\* ROUTES OF EXPOSURE AND EFFECTS \*\*\*  
INHALATION -----  
NO ACUTE EFFECTS EXPECTED TO TWICE EXPOSURE LIMIT.  
SKIN -----  
MINIMAL IRRITATION WITH PROLONGED OR REPEATED CONTACT.  
EYE -----  
CONTACT WITH THE EYE MAY CAUSE MILD TO MODERATE IRRITATION.  
INGESTION -----  
NOT DETERMINED/ NO DATA.  
\*\*\* FIRST AID \*\*\*  
INHALATION -----  
MOVE PERSON TO FRESH AIR.  
SKIN -----  
WASH WITH SOAP AND WATER UNTIL NO ODOR REMAINS. WASH CLOTHING BEFORE REUSE.  
EYE -----  
FLUSH WITH WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ASSISTANCE.  
INGESTION -----  
GIVE LIQUIDS/DEMULCENTS OBTAIN EMERGENCY MEDICAL ATTENTION. SMALL AMOUNTS WHICH ACCIDENTALLY ENTER MOUTH SHOULD BE RINSED OUT UNTIL TASTE OF IT IS GONE.

## \*\*\* SECTION 6 - REACTIVITY DATA \*\*\*

STABILITY-----  
STABLE.  
CONDITIONS TO AVOID: HYDROGEN SULFIDE MAY BE RELEASED IF PRODUCT IS HEATED ABOVE 120 DEG F.  
INCOMPATIBLE MATERIALS-----  
STRONG OXIDIZERS  
HAZARDOUS DECOMPOSITION-----  
PRODUCTS: COMBUSTION MAY PRODUCE OXIDES OF SULFUR, PHOSPHORUS, NITROGEN; CO; HYDROGEN SULFIDE; ASPHYXIANTS  
POLYMERIZATION-----  
WILL NOT OCCUR.

\*\* INACTIVE MSDS PRINT \*\*

STR MINERAL GEAR OIL 140

CODE R00000113411

INACTIVE DATE: 03/18/1992

## \*\*\* SECTION 7 - SPECIAL PROTECTION INFORMATION \*\*\*

## VENTILATION -----

VENTILATE AS NEEDED TO COMPLY WITH EXPOSURE LIMIT.

## \*\*\* PERSONAL PROTECTIVE EQUIPMENT \*\*\*

## EYE -----

SPLASH PROOF CHEMICAL GOGGLES RECOMMENDED TO PROTECT AGAINST SPLASH OF PRODUCT.

## GLOVES -----

IMPERVIOUS GLOVES RECOMMENDED WHEN PROLONGED SKIN CONTACT CANNOT BE AVOIDED.

## RESPIRATOR -----

CONCENTRATION-IN-AIR DETERMINES PROTECTION NEEDED. USE ONLY NIOSH CERTIFIED RESPIRATORY PROTECTION.

## OTHER -----

IF CONTACT IS UNAVOIDABLE, WEAR IMPERVIOUS PROTECTIVE GEAR. LAUNDRER SOILED CLOTHES.

## \*\*\* SECTION 8 - DISPOSAL PROCEDURES \*\*\*

## AQUATIC TOXICITY -----

NOT DETERMINED

## SPILL, LEAK OR RELEASE-----

CONTAIN SPILL. ADVISE EPA; STATE AGENCY IF REQUIRED. ABSORB ON INERT MATERIAL.

## WASTE DISPOSAL METHOD-----

FOLLOW FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT FLUSH TO DRAIN/ STORM SEWER. CONTRACT TO AUTHORIZED DISPOSAL SERVICE.

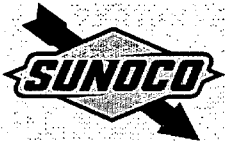
## \*\*\* SECTION 9 - SPECIAL PRECAUTIONS \*\*\*

## STORAGE AND HANDLING CONDITIONS-----

STORAGE HAS TEMPERATURE LIMITS--SEE STABILITY. NFPA CLASS IIIB STORAGE. WASH THOROUGHLY AFTER HANDLING.

## \*\*\* SECTION 10 - ADDITIONAL PRECAUTIONS AND LABELS \*\*\*

\*\* WARNING! \*\* THE VAPOR SPACE OF DRUMS OR TANK CARS MAY CONTAIN HYDROGEN SULFIDE (H<sub>2</sub>S) GAS. CAREFUL VENTING OF CONTAINER, IN A WELL VENTILATED AREA, AWAY FROM PEOPLE, WILL DISSIPATE THIS TOXIC AND FLAMMABLE HEAD. CAUTION! USE ADEQUATE CARE. DO NOT BREATHE VAPORS! WEAR RESPIRATORY PROTECTION EFFECTIVE AGAINST HYDROGEN SULFIDE. KEEP AWAY FROM HEAT, SPARKS OR OPEN FLAME. THE ACGIH TLV FOR HYDROGEN SULFIDE IS 10 PPM (14 MG/M<sup>3</sup>).



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** SUNVIS 832

**Manufacturer Information:**

Sunoco, Inc. (R&M)  
Ten Penn Center  
1801 Market Street  
Philadelphia, Pennsylvania, 19103-1699

**Product Use:**

Lubricating Oil

**Emergency Phone Numbers:**

Chemtrec (800) 424-9300  
Sunoco Inc. (800) 964-8861

**Information:**

Product Safety Information (610) 859-1120

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	0 - 99
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	0.3 - 0.7
BUTYLATED PHENOL	128-39-2	0.1 - 0.5
CALCIUM ALKYLPHENATE	68784-26-9	0 - 0.5
CALCIUM SULFONATE	61789-86-4	0 - 0.5

**EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)**

CAS No.	Governing Body	Exposure Limits

### 3. HAZARDS IDENTIFICATION

• **EMERGENCY OVERVIEW**

See Section 15 for additional first aid information.

**Hazards Ratings:**

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	Health	Fire	Reactivity	PPI
NFPA	0	1	0	
HMIS	0	1	0	X

## POTENTIAL HEALTH EFFECTS

### PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: Skin,

### INHALATION

No acute effects expected.

LC50 (mg/l): no data

LC50 (mg/m3): no data

LC50 (ppm): no data

### SKIN

Practically non-toxic if absorbed through the skin. Substance does not generally irritate and is only mildly irritating to the skin.

Draize Skin Score: no data

Out of 8.0

LD50 (mg/kg): no data

### EYES

Substance causes slight eye irritation.

### INGESTION

Practically non-toxic if ingested.

LD50 (g/kg): no data

## 4. FIRST AID MEASURES

### INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get medical attention.

### SKIN

Wash clothing before reuse. Wash with soap and water. Get medical attention if irritation develops or persists.

### EYES

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

### INGESTION

Material is practically non-toxic. Induction of vomiting is not required. Get medical attention immediately.

## 5. FIRE FIGHTING MEASURES

### EXTINGUISHING MEDIA

Water spray Regular foam Dry chemical Carbon dioxide

### FIRE FIGHTING INSTRUCTIONS

Wear structural fire fighting gear. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### FLAMMABLE PROPERTIES

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point		374			F	COC
Autoignition Temperature				670 ESTIMATED	F	N/A
Lower Explosion Limit				no data	%	N/A
Upper Explosion Limit				no data	%	N/A

## 6. ACCIDENTAL RELEASE MEASURES

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

## 7. HANDLING AND STORAGE

- HANDLING**

Wash thoroughly after handling.

- STORAGE**

NFPA class IIIB storage. Flash point is greater than 200 degrees F.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

- ENGINEERING CONTROLS**

Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Mechanical ventilation recommended.

- PERSONAL PROTECTION**

- EYE PROTECTION**

Splash proof chemical goggles are recommended to protect against the splash of product.

- GLOVES or HAND PROTECTION**

Protective gloves are recommended when prolonged skin contact cannot be avoided. The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Polyethylene; Neoprene; Nitrile; Viton;

- RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted..

- OTHER**

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. Polyethylene; The following materials are acceptable for use as protective clothing: Neoprene; Nitrile; Viton; Polyurethane; Remove contaminated clothing and wash before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	LIGHT YELLOW	
Boiling Point		F	no data	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.87	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	LITTLE ODOR.	
Odor Threshold		ppm	no data	
Vapor Pressure		mmHg	< 0.0001	@ 20 C
Viscosity (F)		SUS	no data	

Viscosity (C)	32	CsT		@ 40 C
% Volatile		wt %	NIL	

ORIGINAL

## 10. STABILITY AND REACTIVITY

- **STABILITY**  
Stable
- **CONDITIONS TO AVOID**  
Avoid heat, sparks and open flame.
- **INCOMPATIBILITY**  
Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**  
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**  
Will not polymerize.

## 11. ECOLOGICAL INFORMATION

No data available

## 12. DISPOSAL CONSIDERATIONS

Follow federal, state and local regulations. This material is not a RCRA hazardous waste, if not contaminated. If material has been "used", RCRA criteria (ignitability, reactivity, corrosivity and toxicity) must be determined. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## 13. TRANSPORT INFORMATION

<u>Governing Body</u>	<u>Mode</u>	<u>Proper Shipping Name</u>
IATA	Air	Not Determined
DOT	Ground	Petroleum Lubricating Oil
IMDG	Marine	No Data Available

<u>Governing Body</u>	<u>Mode</u>	<u>Hazard Class</u>	<u>UN/NA No.</u>	<u>Label</u>
IATA	Air	Not Determined		
DOT	Ground	N/A	N/A	
IMDG	Marine			

## 14. REGULATORY INFORMATION

<u>Regulatory List</u>	<u>Component</u>	<u>CAS No.</u>
Inventory - Canada - Domestic Substances List	BUTYLATED PHENOL	128-39-2
Inventory - Canada - Domestic Substances List	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - Canada - Domestic Substances List	SEVERELY SOLVENT	64741-88-4
	REFINED HEAVY	
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - Canada - Domestic Substances List	ZINC DIALKYL	68457-79-4
	DITHIOPHOSPHATE	
Inventory - European EINECS Inventory	BUTYLATED PHENOL	128-39-2
Inventory - European EINECS Inventory	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - European EINECS Inventory	SEVERELY SOLVENT	64741-88-4
	REFINED HEAVY	
	PARAFFINIC PETROLEUM	

Inventory - European EINECS Inventory	OIL	
	ZINC DIALKYL	68457-79-4
Inventory - Japan - (ENCS)	DITHIOPHOSPHATE	
Inventory - Korea - Existing and Evaluated	BUTYLATED PHENOL	128-39-2
Inventory - Korea - Existing and Evaluated	BUTYLATED PHENOL	128-39-2
Inventory - Korea - Existing and Evaluated	CALCIUM ALKYLPHENATE	68784-26-9
	SEVERELY SOLVENT	64741-88-4
	REFINED HEAVY	
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - Korea - Existing and Evaluated	ZINC DIALKYL	68457-79-4
	DITHIOPHOSPHATE	
Inventory - TSCA - Sect. 8(b) Inventory	BUTYLATED PHENOL	128-39-2
Inventory - TSCA - Sect. 8(b) Inventory	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - TSCA - Sect. 8(b) Inventory	SEVERELY SOLVENT	64741-88-4
	REFINED HEAVY	
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - TSCA - Sect. 8(b) Inventory	ZINC DIALKYL	68457-79-4
	DITHIOPHOSPHATE	

### Title III Classifications Sections 311,312:

- Acute: **NO**
- Chronic: **NO**
- Fire: **NO**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

### **15. OTHER INFORMATION**

Warning! High pressure injection of oil through the skin is a medical emergency. There may be no sign of injury and no initial pain. This oil must be removed completely by a physician. Failure to obtain immediate treatment has resulted in loss of a finger, hand or arm. Please refer to Material Safety Data Sheet for complete information. Limits for the product- 5mg/m<sup>3</sup>, Oil Mist Limit, (OSHA PEL/ACGIH TLV)





## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** SUNVIS 846

**Manufacturer Information:**

Sunoco, Inc. (R&M)  
Ten Penn Center  
1801 Market Street  
Philadelphia, Pennsylvania, 19103-1699

**Product Use:**

Hydraulic Oil

**Emergency Phone Numbers:**

Chemtrec (800) 424-9300  
Sunoco Inc. (800) 964-8861

**Information:**

Product Safety Information (610) 859-1120

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7	0 - 99
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	0 - 99
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	0.3 - 0.7
BUTYLATED PHENOL	128-39-2	0.1 - 0.5
CALCIUM ALKYLPHENATE	68784-26-9	0 - 0.5
CALCIUM SULFONATE	61789-86-4	0 - 0.5
2-ETHYLHEXANOL	104-76-7	- 0.1

#### EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)

CAS No.	Governing Body	Exposure Limits

### 3. HAZARDS IDENTIFICATION

• **EMERGENCY OVERVIEW**

See Section 15 for additional first aid information.

**Hazards Ratings:**

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

**Health      Fire      Reactivity      PPI**

NFPA	0	1	0	
HMIS	0	1	0	X

ORIGINAL

## • POTENTIAL HEALTH EFFECTS

### ▪ PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: Skin,

### ▪ INHALATION

No acute effects expected.

LC50 (mg/l): no data

LC50 (mg/m3): no data

LC50 (ppm): no data

### ▪ SKIN

Practically non-toxic if absorbed through the skin. Substance does not generally irritate and is only mildly irritating to the skin.

Draize Skin Score: no data

Out of 8.0

LD50 (mg/kg): no data

### ▪ EYES

Substance causes slight eye irritation.

### ▪ INGESTION

Practically non-toxic if ingested.

LD50 (g/kg): no data

## 4. FIRST AID MEASURES

### • INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get medical attention.

### • SKIN

Wash clothing before reuse. Wash with soap and water. Get medical attention if irritation develops or persists.

### • EYES

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

### • INGESTION

Material is practically non-toxic. Induction of vomiting is not required. Get medical attention immediately.

## 5. FIRE FIGHTING MEASURES

### • EXTINGUISHING MEDIA

Water spray Regular foam Dry chemical Carbon dioxide

### • FIRE FIGHTING INSTRUCTIONS

Wear structural fire fighting gear. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### FLAMMABLE PROPERTIES

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point		377			F	COC
Autoignition Temperature				670 ESTIMATED	F	N/A
Lower Explosion Limit				no data	%	N/A
Upper Explosion Limit				no data	%	N/A

## **6. ACCIDENTAL RELEASE MEASURES**

ORIGINAL

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

## **7. HANDLING AND STORAGE**

- **HANDLING**

Wash thoroughly after handling.

- **STORAGE**

NFPA class IIIB storage. Flash point is greater than 200 degrees F.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Consult With a Health and Safety Professional for Specific Selections

- **ENGINEERING CONTROLS**

Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Mechanical ventilation recommended.

- **PERSONAL PROTECTION**

- **EYE PROTECTION**

Splash proof chemical goggles are recommended to protect against the splash of product.

- **GLOVES or HAND PROTECTION**

Protective gloves are recommended when prolonged skin contact cannot be avoided. The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Polyethylene; Neoprene; Nitrile; Viton;

- **RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted..

- **OTHER**

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. The following materials are acceptable for use as protective clothing: Polyethylene; Neoprene; Nitrile; Viton; Polyurethane; Remove contaminated clothing and wash before reuse.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	LIGHT YELLOW	
Boiling Point		F	no data	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.87	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	LITTLE ODOR.	
Odor Threshold		ppm	no data	
Vapor Pressure		mmHg	< 0.0001	@ 20 C
Viscosity (F)		SUS	no data	

Viscosity (C)	46	CsT		@ 40 C
% Volatile		wt %	NIL	

## **10. STABILITY AND REACTIVITY**

- STABILITY**

Stable

- CONDITIONS TO AVOID**

Avoid heat, sparks and open flame.

- INCOMPATIBILITY**

Strong oxidizers

- HAZARDOUS DECOMPOSITION PRODUCTS**

Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.

- HAZARDOUS POLYMERIZATION**

Will not polymerize.

## **11. ECOLOGICAL INFORMATION**

No data available

## **12. DISPOSAL CONSIDERATIONS**

Follow federal, state and local regulations. If material has been "used", RCRA criteria (ignitability, reactivity, corrosivity and toxicity) must be determined. This material is not a RCRA hazardous waste, if not contaminated. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## **13. TRANSPORT INFORMATION**

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Proper Shipping Name</u></b>
IATA	Air	Not Determined
DOT	Ground	Petroleum Lubricating Oil
IMDG	Marine	No Data Available

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Hazard Class</u></b>	<b><u>UN/NA No.</u></b>	<b><u>Label</u></b>
IATA	Air	Not Determined		
DOT	Ground	N/A	N/A	
IMDG	Marine			

## **14. REGULATORY INFORMATION**

<b><u>Regulatory List</u></b>	<b><u>Component</u></b>	<b><u>CAS No.</u></b>
Canada - WHMIS: Ingredient Disclosure	2-ETHYLHEXANOL	104-76-7
Inventory - Canada - Domestic Substances List	2-ETHYLHEXANOL	104-76-7
Inventory - Canada - Domestic Substances List	BUTYLATED PHENOL	128-39-2
Inventory - Canada - Domestic Substances List	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - Canada - Domestic Substances List	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - Canada - Domestic Substances List	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - Canada - Domestic Substances List	ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4

Inventory - European EINECS Inventory	2-ETHYLHEXANOL	104-76-7
Inventory - European EINECS Inventory	BUTYLATED PHENOL	128-39-2
Inventory - European EINECS Inventory	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - European EINECS Inventory	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - European EINECS Inventory	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - European EINECS Inventory	ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4
Inventory - Japan - (ENCS)	2-ETHYLHEXANOL	104-76-7
Inventory - Japan - (ENCS)	BUTYLATED PHENOL	128-39-2
Inventory - Korea - Existing and Evaluated	2-ETHYLHEXANOL	104-76-7
Inventory - Korea - Existing and Evaluated	BUTYLATED PHENOL	128-39-2
Inventory - Korea - Existing and Evaluated	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - Korea - Existing and Evaluated	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - Korea - Existing and Evaluated	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - Korea - Existing and Evaluated	ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4
Inventory - TSCA - Sect. 8(b) Inventory	2-ETHYLHEXANOL	104-76-7
Inventory - TSCA - Sect. 8(b) Inventory	BUTYLATED PHENOL	128-39-2
Inventory - TSCA - Sect. 8(b) Inventory	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - TSCA - Sect. 8(b) Inventory	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - TSCA - Sect. 8(b) Inventory	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - TSCA - Sect. 8(b) Inventory	ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4
Massachusetts Right To Know List	2-ETHYLHEXANOL	104-76-7
Pennsylvania Right to Know List	2-ETHYLHEXANOL	104-76-7
TSCA - Sect. 12(b) - Export Notification	2-ETHYLHEXANOL	104-76-7

### Title III Classifications Sections 311,312:

- Acute: **NO**
- Chronic: **NO**
- Fire: **NO**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

### 15. OTHER INFORMATION

Limits for the product- 5mg/m3, Oil Mist Limit, (OSHA PEL/ACGIH TLV) Warning! High pressure injection of oil through the skin is a medical emergency. There may be no sign of injury and no initial pain. This oil must be removed completely by a physician. Failure to obtain immediate treatment has resulted in loss of a finger, hand or arm. Please refer to Material Safety Data Sheet for complete information.



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** SUNVIS 868

**Manufacturer Information:**

Sunoco, Inc. (R&M)  
Ten Penn Center  
1801 Market Street  
Philadelphia, Pennsylvania, 19103-1699

**Product Use:**

Hydraulic Oil

**Emergency Phone Numbers:**

Chemtrec (800) 424-9300  
Sunoco Inc. (800) 964-8861

**Information:**

Product Safety Information (610) 859-1120

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7	0 - 99
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	0 - 99
SEVERELY SOLVENT REFINED RESIDUUM	64742-01-4	0 - 40
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	0.3 - 0.7
BUTYLATED PHENOL	128-39-2	0 - 0.5
CALCIUM ALKYLPHENATE	68784-26-9	0 - 0.5
CALCIUM SULFONATE	31110-95-9	0 - 0.5
2-ETHYLHEXANOL	104-76-7	0 - 0.1

**EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)**

CAS No.	Governing Body	Exposure Limits

### 3. HAZARDS IDENTIFICATION

• **EMERGENCY OVERVIEW**

See Section 15 for additional first aid information.

**Hazards Ratings:**

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	0	1	0	
HMIS	0	1	0	X

#### • POTENTIAL HEALTH EFFECTS

##### ▪ PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: Skin,

##### ▪ INHALATION

LC50 (mg/l): no data

LC50 (mg/m3): no data

LC50 (ppm): no data

##### ▪ SKIN

Practically non-toxic if absorbed through the skin. Substance may cause slight skin irritation.

Draize Skin Score: no data

Out of 8.0

LD50 (mg/kg): no data

##### ▪ EYES

Substance causes slight eye irritation.

##### ▪ INGESTION

Practically non-toxic if ingested.

LD50 (g/kg): no data

## 4. FIRST AID MEASURES

#### • INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get medical attention.

#### • SKIN

Wash clothing before reuse. Wash with soap and water.

#### • EYES

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

#### • INGESTION

Material is practically non-toxic. Induction of vomiting is not required. Get medical attention immediately.

## 5. FIRE FIGHTING MEASURES

#### • EXTINGUISHING MEDIA

Water spray Regular foam Dry chemical Carbon dioxide

#### • FIRE FIGHTING INSTRUCTIONS

Wear structural fire fighting gear. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### FLAMMABLE PROPERTIES

	<u>Typical</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Text Result</u>	<u>Units</u>	<u>Method</u>
Flash Point		410			F	COC
Autoignition Temperature				695 ESTIMATED	F	N/A
Lower Explosion Limit				no data	%	N/A
Upper Explosion Limit				no data	%	N/A

**6. ACCIDENTAL RELEASE MEASURES**

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency, (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

**7. HANDLING AND STORAGE**

- HANDLING**

Wash thoroughly after handling.

- STORAGE**

NFPA class IIIB storage. Flash point is greater than 200 degrees F.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Consult With a Health and Safety Professional for Specific Selections

- ENGINEERING CONTROLS**

Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Mechanical ventilation recommended.

- PERSONAL PROTECTION**

- EYE PROTECTION**

Splash proof chemical goggles are recommended to protect against the splash of product.

- GLOVES or HAND PROTECTION**

Protective gloves are recommended when prolonged skin contact cannot be avoided. The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Neoprene; Nitrile; Viton; Polyethylene;

- RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted..

- OTHER**

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. Polyvinyl alcohol (PVA); The following materials are acceptable for use as protective clothing: Neoprene; Nitrile; Viton; Polyurethane; Remove contaminated clothing and wash before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	YELLOW FLUID	
Boiling Point		F	no data	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.87	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	SLIGHT ODOR	
Odor Threshold		ppm	no data	
Vapor Pressure		mmHg	< 0.0001	@ 20 C



Viscosity (F)		SUS	no data	
Viscosity (C)	68	CsT		@ 40 C
% Volatile		wt %	NIL	

ORIGINAL

## **10. STABILITY AND REACTIVITY**

- **STABILITY**  
Stable
- **CONDITIONS TO AVOID**  
Avoid heat, sparks and open flame.
- **INCOMPATIBILITY**  
Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**  
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**  
Will not polymerize.

## **11. ECOLOGICAL INFORMATION**

No data available

## **12. DISPOSAL CONSIDERATIONS**

Follow federal, state and local regulations. This material is not a RCRA hazardous waste, if not contaminated. If material has been "used", RCRA criteria (ignitability, reactivity, corrosivity and toxicity) must be determined. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## **13. TRANSPORT INFORMATION**

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Proper Shipping Name</u></b>
IATA	Air	Not Determined
DOT	Ground	Not Regulated
IMDG	Marine	No Data Available

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Hazard Class</u></b>	<b><u>UN/NA No.</u></b>	<b><u>Label</u></b>
IATA	Air	Not Determined		
DOT	Ground	N/A	N/A	
IMDG	Marine			

## **14. REGULATORY INFORMATION**

<b><u>Regulatory List</u></b>	<b><u>Component</u></b>	<b><u>CAS No.</u></b>
Canada - WHMIS: Ingredient Disclosure	2-ETHYLHEXANOL	104-76-7
Inventory - Canada - Domestic Substances List	2-ETHYLHEXANOL	104-76-7
Inventory - Canada - Domestic Substances List	BUTYLATED PHENOL	128-39-2
Inventory - Canada - Domestic Substances List	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - Canada - Domestic Substances List	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - Canada - Domestic Substances List	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - Canada - Domestic Substances List	SEVERELY SOLVENT	64742-01-4

Inventory - Canada - Domestic Substances List	REFINED RESIDUUM ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4
Inventory - European EINECS Inventory	2-ETHYLHEXANOL	104-76-7
Inventory - European EINECS Inventory	BUTYLATED PHENOL	128-39-2
Inventory - European EINECS Inventory	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - European EINECS Inventory	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - European EINECS Inventory	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - European EINECS Inventory	SEVERELY SOLVENT REFINED RESIDUUM	64742-01-4
Inventory - European EINECS Inventory	ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4
Inventory - Japan - (ENCS)	2-ETHYLHEXANOL	104-76-7
Inventory - Japan - (ENCS)	BUTYLATED PHENOL	128-39-2
Inventory - Korea - Existing and Evaluated	2-ETHYLHEXANOL	104-76-7
Inventory - Korea - Existing and Evaluated	BUTYLATED PHENOL	128-39-2
Inventory - Korea - Existing and Evaluated	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - Korea - Existing and Evaluated	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - Korea - Existing and Evaluated	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - Korea - Existing and Evaluated	SEVERELY SOLVENT REFINED RESIDUUM	64742-01-4
Inventory - Korea - Existing and Evaluated	ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4
Inventory - TSCA - Sect. 8(b) Inventory	2-ETHYLHEXANOL	104-76-7
Inventory - TSCA - Sect. 8(b) Inventory	BUTYLATED PHENOL	128-39-2
Inventory - TSCA - Sect. 8(b) Inventory	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - TSCA - Sect. 8(b) Inventory	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - TSCA - Sect. 8(b) Inventory	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - TSCA - Sect. 8(b) Inventory	SEVERELY SOLVENT REFINED RESIDUUM	64742-01-4
Inventory - TSCA - Sect. 8(b) Inventory	ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4
Massachusetts Right To Know List	2-ETHYLHEXANOL	104-76-7
Pennsylvania Right to Know List	2-ETHYLHEXANOL	104-76-7
TSCA - Sect. 12(b) - Export Notification	2-ETHYLHEXANOL	104-76-7

### Title III Classifications Sections 311,312:

- Acute: **NO**
- Chronic: **NO**
- Fire: **NO**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

**15. OTHER INFORMATION**

Limits for the product- 5mg/m<sup>3</sup>, Oil Mist Limit, (OSHA PEL/ACGIH TLV) Warning! High pressure injection of oil through the skin is a medical emergency. There may be no sign of injury and no initial pain. This oil must be removed completely by a physician. Failure to obtain immediate treatment has resulted in loss of a finger, hand or arm. Please refer to Material Safety Data Sheet for complete information.



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** SUNVIS 8100

**Manufacturer Information:**

Sunoco, Inc. (R&M)  
Ten Penn Center  
1801 Market Street  
Philadelphia, Pennsylvania, 19103-1699

**Product Use:**

Lubricating Oil

**Emergency Phone Numbers:**

Chemtrec (800) 424-9300  
Sunoco Inc. (800) 964-8861

**Information:**

Product Safety Information (610) 859-1120

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7	0 - 99
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	0 - 99
SEVERELY SOLVENT REFINED RESIDUUM	64742-01-4	0 - 40
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	0.3 - 0.7
CALCIUM SULFONATE	31110-95-9	0.1 - 0.5
BUTYLATED PHENOL	128-39-2	0 - 0.5
CALCIUM ALKYLPHENATE	68784-26-9	0 - 0.5
2-ETHYLHEXANOL	104-76-7	0 - 0.1

#### EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)

CAS No.	Governing Body	Exposure Limits

### 3. HAZARDS IDENTIFICATION

• **EMERGENCY OVERVIEW**

See Section 15 for additional first aid information.

**Hazards Ratings:**

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	0	1	0	
HMIS	0	1	0	X

#### • POTENTIAL HEALTH EFFECTS

##### ▪ PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: Skin,

##### ▪ INHALATION

No acute effects expected.

LC50 (mg/l): no data

LC50 (mg/m3): no data

LC50 (ppm): no data

##### ▪ SKIN

Practically non-toxic if absorbed through the skin. Substance may cause slight skin irritation.

Draize Skin Score: no data

Out of 8.0

LD50 (mg/kg): no data

##### ▪ EYES

Substance causes slight eye irritation.

##### ▪ INGESTION

Practically non-toxic if ingested.

LD50 (g/kg): no data

#### 4. FIRST AID MEASURES

##### • INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get medical attention.

##### • SKIN

Wash clothing before reuse. Wash with soap and water. Get medical attention if irritation develops or persists.

##### • EYES

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

##### • INGESTION

Material is practically non-toxic. Induction of vomiting is not required. Get medical attention immediately.

#### 5. FIRE FIGHTING MEASURES

##### • EXTINGUISHING MEDIA

Water spray Regular foam Dry chemical Carbon dioxide

##### • FIRE FIGHTING INSTRUCTIONS

Wear structural fire fighting gear. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### FLAMMABLE PROPERTIES

	<u>Typical</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Text Result</u>	<u>Units</u>	<u>Method</u>
Flash Point		475			F	COC
Autoignition Temperature				695 ESTIMATED	F	N/A
Lower Explosion Limit				no data	%	N/A
Upper Explosion Limit				no data	%	N/A

**6. ACCIDENTAL RELEASE MEASURES**

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

**7. HANDLING AND STORAGE**

- HANDLING**

Wash thoroughly after handling.

- STORAGE**

NFPA class IIIB storage. Flash point is greater than 200 degrees F.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Consult With a Health and Safety Professional for Specific Selections

- ENGINEERING CONTROLS**

Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Mechanical ventilation recommended.

- PERSONAL PROTECTION**

- EYE PROTECTION**

Splash proof chemical goggles are recommended to protect against the splash of product.

- GLOVES or HAND PROTECTION**

Protective gloves are recommended when prolonged skin contact cannot be avoided. The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Polyethylene; Neoprene; Nitrile; Viton;

- RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted..

- OTHER**

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. The following materials are acceptable for use as protective clothing: Polyethylene; Neoprene; Nitrile; Viton; Polyurethane; Remove contaminated clothing and wash before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	DARK AMBER FLUID	
Boiling Point		F	no data	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.88	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	LITTLE ODOR.	
Odor Threshold		ppm	no data	

Vapor Pressure		mmHg	<0.0001	@ 20 C
Viscosity (F)		SUS	no data	
Viscosity (C)	100	CsT		@ 40 C
% Volatile		wt %	NIL	

ORIGINAL

## **10. STABILITY AND REACTIVITY**

- **STABILITY**  
Stable
- **CONDITIONS TO AVOID**  
Avoid contact with air, water, heat, sparks and open flames.
- **INCOMPATIBILITY**  
Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**  
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**  
Will not polymerize.

## **11. ECOLOGICAL INFORMATION**

No data available

## **12. DISPOSAL CONSIDERATIONS**

Follow federal, state and local regulations. This material is not a RCRA hazardous waste, if not contaminated. If material has been "used", RCRA criteria (ignitability, reactivity, corrosivity and toxicity) must be determined. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## **13. TRANSPORT INFORMATION**

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Proper Shipping Name</u></b>			
IATA	Air	Not Determined			
DOT	Ground	Petroleum Lubricating Oil			
IMDG	Marine	No Data Available			

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Hazard Class</u></b>	<b><u>UN/NA No.</u></b>	<b><u>Label</u></b>
IATA	Air	Not Determined		
DOT	Ground	N/A	N/A	
IMDG	Marine			

## **14. REGULATORY INFORMATION**

<b><u>Regulatory List</u></b>	<b><u>Component</u></b>	<b><u>CAS No.</u></b>
Canada - WHMIS: Ingredient Disclosure	2-ETHYLHEXANOL	104-76-7
Inventory - Canada - Domestic Substances List	2-ETHYLHEXANOL	104-76-7
Inventory - Canada - Domestic Substances List	BUTYLATED PHENOL	128-39-2
Inventory - Canada - Domestic Substances List	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - Canada - Domestic Substances List	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - Canada - Domestic Substances List	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4

Inventory - Canada - Domestic Substances List	SEVERELY SOLVENT	64742-01-4
Inventory - Canada - Domestic Substances List	REFINED RESIDUUM	
Inventory - European EINECS Inventory	ZINC DIALKYL	68457-79-4
Inventory - European EINECS Inventory	DITHIOPHOSPHATE	
Inventory - European EINECS Inventory	2-ETHYLHEXANOL	104-76-7
Inventory - European EINECS Inventory	BUTYLATED PHENOL	128-39-2
	CALCIUM ALKYLPHENATE	68784-26-9
	HYDROTREATED HEAVY	64742-54-7
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - European EINECS Inventory	SEVERELY SOLVENT	64741-88-4
	REFINED HEAVY	
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - European EINECS Inventory	SEVERELY SOLVENT	64742-01-4
	REFINED RESIDUUM	
Inventory - European EINECS Inventory	ZINC DIALKYL	68457-79-4
	DITHIOPHOSPHATE	
Inventory - Japan - (ENCS)	2-ETHYLHEXANOL	104-76-7
Inventory - Japan - (ENCS)	BUTYLATED PHENOL	128-39-2
Inventory - Korea - Existing and Evaluated	2-ETHYLHEXANOL	104-76-7
Inventory - Korea - Existing and Evaluated	BUTYLATED PHENOL	128-39-2
Inventory - Korea - Existing and Evaluated	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - Korea - Existing and Evaluated	HYDROTREATED HEAVY	64742-54-7
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - Korea - Existing and Evaluated	SEVERELY SOLVENT	64741-88-4
	REFINED HEAVY	
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - Korea - Existing and Evaluated	SEVERELY SOLVENT	64742-01-4
	REFINED RESIDUUM	
Inventory - Korea - Existing and Evaluated	ZINC DIALKYL	68457-79-4
	DITHIOPHOSPHATE	
Inventory - TSCA - Sect. 8(b) Inventory	2-ETHYLHEXANOL	104-76-7
Inventory - TSCA - Sect. 8(b) Inventory	BUTYLATED PHENOL	128-39-2
Inventory - TSCA - Sect. 8(b) Inventory	CALCIUM ALKYLPHENATE	68784-26-9
Inventory - TSCA - Sect. 8(b) Inventory	HYDROTREATED HEAVY	64742-54-7
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - TSCA - Sect. 8(b) Inventory	SEVERELY SOLVENT	64741-88-4
	REFINED HEAVY	
	PARAFFINIC PETROLEUM	
	OIL	
Inventory - TSCA - Sect. 8(b) Inventory	SEVERELY SOLVENT	64742-01-4
	REFINED RESIDUUM	
Inventory - TSCA - Sect. 8(b) Inventory	ZINC DIALKYL	68457-79-4
	DITHIOPHOSPHATE	
Massachusetts Right To Know List	2-ETHYLHEXANOL	104-76-7
Pennsylvania Right to Know List	2-ETHYLHEXANOL	104-76-7
TSCA - Sect. 12(b) - Export Notification	2-ETHYLHEXANOL	104-76-7

### Title III Classifications Sections 311,312:

- Acute: **NO**
- Chronic: **NO**
- Fire: **NO**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**



**15. OTHER INFORMATION**

Warning! High pressure injection of oil through the skin is a medical emergency. There may be no sign of injury and no initial pain. This oil must be removed completely by a physician. Failure to obtain immediate treatment has resulted in loss of a finger, hand or arm. Please refer to Material Safety Data Sheet for complete information. Limits for the product- 5mg/m<sup>3</sup>, Oil Mist Limit, (OSHA PEL/ACGIH TLV)



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** SUNVIS 932

**Manufacturer Information:**

Sunoco, Inc. (R&M)  
Ten Penn Center  
1801 Market Street  
Philadelphia, Pennsylvania, 19103-1699

**Product Use:**

Industrial Lubricant

**Emergency Phone Numbers:**

Chemtrec (800) 424-9300  
Sunoco Inc. (800) 964-8861

**Information:**

Product Safety Information (610) 859-1120

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7	0 - 100
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	0 - 100
ACRYLIC COPOLYMER	68171-46-0	0 - 1
ALKYLATED AROMATIC AMINE		0 - 1
ALKYLPHENOL		0 - 1

#### EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)

CAS No.	Governing Body	Exposure Limits

### 3. HAZARDS IDENTIFICATION

#### • EMERGENCY OVERVIEW

See Section 15 for additional first aid information.

**Hazards Ratings:**

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	0	1	0	
HMIS	0	1	0	X

## • POTENTIAL HEALTH EFFECTS

### ▪ PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: Skin,

### ▪ INHALATION

No acute effects expected.

LC50 (mg/l): no data

LC50 (mg/m3): no data

LC50 (ppm): no data

### ▪ SKIN

Practically non-toxic if absorbed through the skin. Substance may cause slight skin irritation.

Draize Skin Score: no data

Out of 8.0

LD50 (mg/kg): no data

### ▪ EYES

Substance causes slight eye irritation.

### ▪ INGESTION

Practically non-toxic if ingested.

LD50 (g/kg): no data

## 4. FIRST AID MEASURES

### • INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get medical attention.

### • SKIN

Wash with soap and water. Wash clothing before reuse. Injection injuries may not appear serious at first but within a few hours, without proper treatment, the area will become swollen, discolored and extremely painful.

### • EYES

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

### • INGESTION

Material is practically non-toxic. Induction of vomiting is not required. Get medical attention immediately.

## 5. FIRE FIGHTING MEASURES

### • EXTINGUISHING MEDIA

Water spray Regular foam Dry chemical Carbon dioxide

### • FIRE FIGHTING INSTRUCTIONS

Wear structural fire fighting gear. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### FLAMMABLE PROPERTIES

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point		390			F	COC
Autoignition Temperature				685 ESTIMATED	F	N/A
Lower Explosion Limit				no data	%	N/A
Upper Explosion Limit				no data	%	N/A

**6. ACCIDENTAL RELEASE MEASURES**

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

**7. HANDLING AND STORAGE**

- HANDLING**

Wash thoroughly after handling.

- STORAGE**

NFPA class IIIB storage. Flash point is greater than 200 degrees F.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Consult With a Health and Safety Professional for Specific Selections

- ENGINEERING CONTROLS**

No special ventilation requirements.

- PERSONAL PROTECTION**

- EYE PROTECTION**

Splash proof chemical goggles are recommended to protect against the splash of product.

- GLOVES or HAND PROTECTION**

Protective gloves are recommended when prolonged skin contact cannot be avoided.

- RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted.. Half-mask air purifying respirator with dust / mist filters or HEPA filter cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with dust / mist filters or HEPA filter cartridges is acceptable for exposures to fifty (50) times the exposure limit.

- OTHER**

No special protection is normally needed for non-fire emergencies.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	COLORLESS OIL.	
Boiling Point		F	no data	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.86	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	NO ODOR.	
Odor Threshold		ppm	no data	
Vapor Pressure		mmHg	NIL	@ 20 C
Viscosity (F)		SUS	no data	
Viscosity (C)	32	CsT		@ 40 C

% Volatile		wt %	NIL	
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ORIGINAL

## **10. STABILITY AND REACTIVITY**

- **STABILITY**  
Stable
- **CONDITIONS TO AVOID**  
Avoid heat, sparks and open flame.
- **INCOMPATIBILITY**  
Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**  
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**  
Will not polymerize.

## **11. ECOLOGICAL INFORMATION**

No data available

## **12. DISPOSAL CONSIDERATIONS**

Follow federal, state and local regulations. If material has been "used", RCRA criteria (ignitability, reactivity, corrosivity and toxicity) must be determined. This material is not a RCRA hazardous waste, if not contaminated. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## **13. TRANSPORT INFORMATION**

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Proper Shipping Name</u></b>
IATA	Air	Not Determined
DOT	Ground	Petroleum Lubricating Oil
IMDG	Marine	No Data Available

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Hazard Class</u></b>	<b><u>UN/NA No.</u></b>	<b><u>Label</u></b>
IATA	Air	Not Determined		
DOT	Ground	N/A	N/A	
IMDG	Marine			

## **14. REGULATORY INFORMATION**

<b><u>Regulatory List</u></b>	<b><u>Component</u></b>	<b><u>CAS No.</u></b>
Inventory - Canada - Domestic Substances List	ACRYLIC COPOLYMER	68171-46-0
Inventory - Canada - Domestic Substances List	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - Canada - Domestic Substances List	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - European EINECS Inventory	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - European EINECS Inventory	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4

Inventory - Japan - (ENCS)	ACRYLIC COPOLYMER	68171-46-0
Inventory - Korea - Existing and Evaluated	ACRYLIC COPOLYMER	68171-46-0
Inventory - Korea - Existing and Evaluated	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - Korea - Existing and Evaluated	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4
Inventory - TSCA - Sect. 8(b) Inventory	ACRYLIC COPOLYMER	68171-46-0
Inventory - TSCA - Sect. 8(b) Inventory	HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7
Inventory - TSCA - Sect. 8(b) Inventory	SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4

### Title III Classifications Sections 311,312:

- Acute: **NO**
- Chronic: **NO**
- Fire: **NO**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

### 15. OTHER INFORMATION

Warning! High pressure injection of oil through the skin is a medical emergency. There may be no sign of injury and no initial pain. This oil must be removed completely by a physician. Failure to obtain immediate treatment has resulted in loss of a finger, hand or arm. Please refer to Material Safety Data Sheet for complete information. Limits for the product- 5mg/m3, Oil Mist Limit, (OSHA PEL/ACGIH TLV)



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** SUNVIS 946

**Manufacturer Information:**

Sunoco, Inc. (R&M)  
Ten Penn Center  
1801 Market Street  
Philadelphia, Pennsylvania, 19103-1699

**Product Use:**

Industrial Lubricant

**Emergency Phone Numbers:**

Chemtrec (800) 424-9300  
Sunoco Inc. (800) 964-8861

**Information:**

Product Safety Information (610) 859-1120

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7	0 - 99
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	0 - 99
ALKYLPHENOL		0 - 10
ACRYLIC COPOLYMER	68171-46-0	0 - 1
ALKYLATED AROMATIC AMINE		0 - 1

**EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)**

CAS No.	Governing Body	Exposure Limits

### 3. HAZARDS IDENTIFICATION

• **EMERGENCY OVERVIEW**

See Section 15 for additional first aid information.

**Hazards Ratings:**

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	0	1	0	
HMIS	0	1	0	X

## • POTENTIAL HEALTH EFFECTS

### ▪ PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: Skin,

### ▪ INHALATION

No acute effects expected.

LC50 (mg/l): no data

LC50 (mg/m3): no data

LC50 (ppm): no data

### ▪ SKIN

Practically non-toxic if absorbed through the skin. Substance may cause slight skin irritation.

Draize Skin Score: no data

Out of 8.0

LD50 (mg/kg): no data

### ▪ EYES

Substance causes slight eye irritation.

### ▪ INGESTION

Practically non-toxic if ingested.

LD50 (g/kg): no data

## 4. FIRST AID MEASURES

### • INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### • SKIN

Wash clothing before reuse. Wash with soap and water.

### • EYES

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

### • INGESTION

Material is practically non-toxic. Induction of vomiting is not required. Get medical attention immediately.

## 5. FIRE FIGHTING MEASURES

### • EXTINGUISHING MEDIA

Water spray Regular foam Dry chemical Carbon dioxide

### • FIRE FIGHTING INSTRUCTIONS

Wear structural fire fighting gear. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### FLAMMABLE PROPERTIES

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point		410			F	COC
Autoignition Temperature				695 ESTIMATED	F	N/A
Lower Explosion Limit				no data	%	N/A
Upper Explosion Limit				no data	%	N/A



**6. ACCIDENTAL RELEASE MEASURES**

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

**7. HANDLING AND STORAGE**

- HANDLING**

Wash thoroughly after handling.

- STORAGE**

NFPA class IIIB storage. Flash point is greater than 200 degrees F.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Consult With a Health and Safety Professional for Specific Selections

- ENGINEERING CONTROLS**

Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Mechanical ventilation recommended.

- PERSONAL PROTECTION**

- EYE PROTECTION**

Splash proof chemical goggles are recommended to protect against the splash of product.

- GLOVES or HAND PROTECTION**

Protective gloves are recommended when prolonged skin contact cannot be avoided. The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Polyethylene; Neoprene; Nitrile; Viton;

- RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted..

- OTHER**

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. The following materials are acceptable for use as protective clothing: Polyethylene; Neoprene; Nitrile; Viton; Polyurethane; Remove contaminated clothing and wash before reuse.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	YELLOW LIQUID	
Boiling Point		F	no data	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.87	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	NO ODOR.	
Odor Threshold		ppm	no data	
Vapor Pressure		mmHg	< 0.0001	@ 20 C
Viscosity (F)		SUS	no data	

Viscosity (C)	46	CsT		@ 40 C
% Volatile		wt %	NIL	

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## **10. STABILITY AND REACTIVITY**

- **STABILITY**  
Stable
- **CONDITIONS TO AVOID**
- **INCOMPATIBILITY**  
Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**  
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**  
Will not polymerize.

## **11. ECOLOGICAL INFORMATION**

No data available

## **12. DISPOSAL CONSIDERATIONS**

Follow federal, state and local regulations. This material is not a RCRA hazardous waste, if not contaminated. If material has been "used", RCRA criteria (ignitability, reactivity, corrosivity and toxicity) must be determined. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## **13. TRANSPORT INFORMATION**

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Proper Shipping Name</u></b>
IATA	Air	Not Determined
DOT	Ground	Petroleum Lubricating Oil
IMDG	Marine	Not Regulated

<b><u>Governing Body</u></b>	<b><u>Mode</u></b>	<b><u>Hazard Class</u></b>	<b><u>UN/NA No.</u></b>	<b><u>Label</u></b>
IATA	Air	Not Determined		
DOT	Ground	N/A	N/A	
IMDG	Marine			

## **14. REGULATORY INFORMATION**

<b><u>Regulatory List</u></b>	<b><u>Component</u></b>	<b><u>CAS No.</u></b>
Inventory - Canada - Domestic Substances List	ACRYLIC COPOLYMER	68171-46-0
Inventory - Japan - (ENCS)	ACRYLIC COPOLYMER	68171-46-0
Inventory - Korea - Existing and Evaluated	ACRYLIC COPOLYMER	68171-46-0
Inventory - TSCA - Sect. 8(b) Inventory	ACRYLIC COPOLYMER	68171-46-0

**Title III Classifications Sections 311,312:**

- Acute: **NO**
- Chronic: **NO**
- Fire: **NO**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

## **15. OTHER INFORMATION**

Limits for the product- 5mg/m3, Oil Mist Limit, (OSHA PEL/ACGIH TLV) Warning! High pressure injection of oil through the skin is a medical emergency. There may be no sign of injury and no initial pain. This oil must be removed completely by a physician. Failure to obtain immediate treatment has resulted in loss of a finger, hand or arm. Please refer to Material Safety Data Sheet for complete information.



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** SUNVIS 968

**Manufacturer Information:**

Sunoco, Inc. (R&M)  
Ten Penn Center  
1801 Market Street  
Philadelphia, Pennsylvania, 19103-1699

**Product Use:**

Premium Turbine Oil

**Emergency Phone Numbers:**

Chemtrec (800) 424-9300  
Sunoco Inc. (800) 964-8861

**Information:**

Product Safety Information (610) 859-1120

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
HYDROTREATED HEAVY PARAFFINIC PETROLEUM OIL	64742-54-7	0 - 100
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	0 - 100
SEVERELY SOLVENT REFINED RESIDUUM	64742-01-4	0 - 15
ACRYLIC COPOLYMER	68171-46-0	0 - 1
ALKYLATED AROMATIC AMINE		0 - 1
ALKYLPHENOL		0 - 1

#### EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)

CAS No.	Governing Body	Exposure Limits

### 3. HAZARDS IDENTIFICATION

• **EMERGENCY OVERVIEW**

See Section 15 for additional first aid information.

**Hazards Ratings:**

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	0	1	0	

## • POTENTIAL HEALTH EFFECTS

### ▪ PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: Skin,

### ▪ INHALATION

LC50 (mg/l): no data

LC50 (mg/m3): no data

LC50 (ppm): no data

### ▪ SKIN

Practically non-toxic if absorbed through the skin. Substance may cause slight skin irritation.

Draize Skin Score: no data

Out of 8.0

LD50 (mg/kg): no data

### ▪ EYES

Substance causes slight eye irritation.

### ▪ INGESTION

Practically non-toxic if ingested.

LD50 (g/kg): no data

## 4. FIRST AID MEASURES

### • INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get medical attention.

### • SKIN

Wash clothing before reuse. Wash with soap and water.

### • EYES

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

### • INGESTION

Material is practically non-toxic. Induction of vomiting is not required. Get medical attention immediately.

## 5. FIRE FIGHTING MEASURES

### • EXTINGUISHING MEDIA

Water spray Regular foam Dry chemical Carbon dioxide

### • FIRE FIGHTING INSTRUCTIONS

Wear structural fire fighting gear. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### FLAMMABLE PROPERTIES

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point		430			F	COC
Autoignition Temperature				700 ESTIMATED	F	N/A
Lower Explosion Limit				no data	%	N/A
Upper Explosion Limit				no data	%	N/A

## 6. ACCIDENTAL RELEASE MEASURES

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

## 7. HANDLING AND STORAGE

- HANDLING**

Wash thoroughly after handling.

- STORAGE**

NFPA class IIIB storage. Flash point is greater than 200 degrees F.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

- ENGINEERING CONTROLS**

Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Mechanical ventilation recommended.

- PERSONAL PROTECTION**

- EYE PROTECTION**

Splash proof chemical goggles are recommended to protect against the splash of product.

- GLOVES or HAND PROTECTION**

Protective gloves are recommended when prolonged skin contact cannot be avoided. The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Polyethylene; Neoprene; Nitrile; Viton;

- RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted..

- OTHER**

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. Polyethylene; The following materials are acceptable for use as protective clothing: Neoprene; Nitrile; Viton; Polyurethane; Remove contaminated clothing and wash before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	YELLOW LIQUID	
Boiling Point		F	no data	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.87	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	NO ODOR.	
Odor Threshold		ppm	no data	
Vapor Pressure		mmHg	NIL	@ 20 C
Viscosity (F)		SUS	no data	

Viscosity (C)	0.8	CsT		@ 40 C
% Volatile		wt %	NIL	

## **10. STABILITY AND REACTIVITY**

- **STABILITY**  
Stable
- **CONDITIONS TO AVOID**  
Avoid heat, sparks and open flame.
- **INCOMPATIBILITY**  
Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**  
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**  
Will not polymerize.

## **11. ECOLOGICAL INFORMATION**

No data available

## **12. DISPOSAL CONSIDERATIONS**

Follow federal, state and local regulations. This material is not a RCRA hazardous waste, if not contaminated. If material has been "used", RCRA criteria (ignitability, reactivity, corrosivity and toxicity) must be determined. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

## **13. TRANSPORT INFORMATION**

<u>Governing Body</u>	<u>Mode</u>	<u>Proper Shipping Name</u>
DOT	Ground	Petroleum Lubricating Oil

<u>Governing Body</u>	<u>Mode</u>	<u>Hazard Class</u>	<u>UN/NA No.</u>	<u>Label</u>
DOT	Ground	N/A	N/A	Not Regulated

## **14. REGULATORY INFORMATION**

<u>Regulatory List</u>	<u>Component</u>	<u>CAS No.</u>
Inventory - Canada - Domestic Substances List	ACRYLIC COPOLYMER	68171-46-0
Inventory - Japan - (ENCS)	ACRYLIC COPOLYMER	68171-46-0
Inventory - Korea - Existing and Evaluated	ACRYLIC COPOLYMER	68171-46-0
Inventory - TSCA - Sect. 8(b) Inventory	ACRYLIC COPOLYMER	68171-46-0

### **Title III Classifications Sections 311,312:**

- Acute: **NO**
- Chronic: **NO**
- Fire: **NO**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

## **15. OTHER INFORMATION**

Warning! High pressure injection of oil through the skin is a medical emergency. There may be no sign of injury and no initial pain. This oil must be removed completely by a physician. Failure to obtain immediate treatment has

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resulted in loss of a finger, hand or arm. Please refer to Material Safety Data Sheet for complete information. Limits for the product- 5mg/m<sup>3</sup>, Oil Mist Limit, (OSHA PEL/ACGIH TLV) WHMIS Classification: not controlled Please refer to the material safety data sheet for complete information.





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## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** MINERAL SPIRITS

**Manufacturer Information:**

Sunoco, Inc. (R&M)  
Ten Penn Center  
1801 Market Street  
Philadelphia, Pennsylvania, 19103-1699

**Product Use:**

Chemical intermediate

**Emergency Phone Numbers:**

Chemtrec (800) 424-9300  
Sunoco Inc. (800) 964-8861

**Information:**

Product Safety Information (610) 859-1120

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
STODDARD SOLVENT	8052-41-3	0 - 100
1,2,4-TRIMETHYLBENZENE	95-63-6	0 - 5
1,3,5-TRIMETHYLBENZENE	108-67-8	0 - 5
NAPHTHALENE	91-20-3	0.03 - 0.03

#### EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)

	CAS No.	Governing Body	Exposure Limits
Limit for the product		Sunoco	TWA 100 ppm
NAPHTHALENE	91-20-3	ACGIH	STEL 15 ppm
NAPHTHALENE	91-20-3	ACGIH	TWA 10 ppm
NAPHTHALENE	91-20-3	OSHA	TWA 10 ppm
STODDARD SOLVENT	8052-41-3	ACGIH	TWA 100 ppm
STODDARD SOLVENT	8052-41-3	OSHA	TWA 500 ppm

### 3. HAZARDS IDENTIFICATION

#### • EMERGENCY OVERVIEW

Danger! Combustible liquid and vapor. Harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage. May produce nervous system effects, including drowsiness, dizziness, coma and even death. May cause skin irritation.

**Hazards Ratings:**

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

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	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	1	2	0	
HMIS	1	2	0	X

#### • POTENTIAL HEALTH EFFECTS

##### ▪ PRE-EXISTING MEDICAL CONDITIONS

The following diseases or disorders may be aggravated by exposure to this product: Skin; Eye; Liver; Kidney; Nervous system, Respiratory system; Lung (asthma-like conditions);

##### ▪ INHALATION

High vapor concentrations are irritating to the eyes, nose, throat, and lungs. Can cause severe central nervous system depression (including unconsciousness).

LC50 (mg/l): no data

LC50 (mg/m3): > 5500

LC50 (ppm): no data

##### ▪ SKIN

Practically non-toxic if absorbed through the skin. Moderately irritating to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

Draize Skin Score: 4.5 Out of 8.0

LD50 (mg/kg): > 3,000

##### ▪ EYES

Substance causes slight eye irritation.

##### ▪ INGESTION

Product may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage.

LD50 (g/kg): > 5

#### 4. FIRST AID MEASURES

##### • INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention.

##### • SKIN

Wash with soap and water. Get medical attention if irritation develops or persists. Wash clothing before reuse.

##### • EYES

Flush eye with water for 15 minutes. Get medical attention.

##### • INGESTION

Do not induce vomiting! Do not give liquids! Get medical attention immediately.

#### 5. FIRE FIGHTING MEASURES

##### • EXTINGUISHING MEDIA

Water spray; Regular foam; Dry chemical; Carbon dioxide;

##### • FIRE FIGHTING INSTRUCTIONS

Use water spray to cool fire exposed tanks and containers. Wear structural fire fighting gear.

#### FLAMMABLE PROPERTIES

	<u>Typical</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Text Result</u>	<u>Units</u>	<u>Method</u>
Flash Point				105 MINIMUM TCC	F	N/A

Autoignition Temperature				540 ESTIMATED	F	N/A
Lower Explosion Limit				ESTIMATED 0.8	%	N/A
Upper Explosion Limit				ESTIMATED 5.0	%	N/A

## 6. ACCIDENTAL RELEASE MEASURES

Prevent ignition, stop leak and ventilate the area. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Use appropriate respiratory protection and protective clothing for a large spill, leak or release. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Vacuum or sweep up material and place in a disposal container.

## 7. HANDLING AND STORAGE

### • HANDLING

Ground and bond containers when transferring material. Wash thoroughly after handling. Never siphon by mouth.

### • STORAGE

Keep away from heat, sparks, and flame. Keep container closed when not in use. NFPA class II storage. Flash point is greater than 100 degrees F and less than 140 degrees F.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

### • ENGINEERING CONTROLS

Use with adequate ventilation. Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit.

### • PERSONAL PROTECTION

#### ▪ EYE PROTECTION

Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

#### ▪ GLOVES or HAND PROTECTION

Protective gloves are recommended when prolonged skin contact cannot be avoided. The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Polyethylene; Neoprene; Nitrile; Polyvinyl alcohol; Viton;

#### ▪ RESPIRATORY PROTECTION

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

#### ▪ OTHER

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required. The following materials are acceptable for use as protective clothing: Polyvinyl alcohol (PVA); Neoprene; Nitrile; Viton; Polyurethane; Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Remove contaminated clothing and wash before reuse. For non-fire emergencies, positive pressure SCBA and structural firefighter's protective clothing will provide only limited protection.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Property	Typical	Units	Text Result	Reference
Appearance		N/A	CLEAR LIQUID.	
Boiling Point		F	300 TO 390	
Bulk Density		lb/gal	no data	
Melting Point		F	no data	
Molecular Weight		g/mole	no data	
Octanol/Water Coefficient		N/A	no data	
pH		N/A	no data	
Specific Gravity	0.79	N/A		
Solubility In Water		wt %	NIL	
Odor		N/A	SOLVENT ODOR.	
Odor Threshold		ppm	no data	
Vapor Pressure		mmHg	< 1.5	@ 20 C
Viscosity (F)		SUS	no data	
Viscosity (C)		CsT	no data	
% Volatile	100	wt %		

**10. STABILITY AND REACTIVITY**

- **STABILITY**  
Stable
- **CONDITIONS TO AVOID**  
Avoid heat, sparks and open flame. Avoid static discharge.
- **INCOMPATIBILITY**  
Strong oxidizers
- **HAZARDOUS DECOMPOSITION PRODUCTS**  
Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**  
Will not polymerize.

**11. ECOLOGICAL INFORMATION**

No data available

**12. DISPOSAL CONSIDERATIONS**

Follow federal, state and local regulations. This material is a RCRA hazardous waste. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

**13. TRANSPORT INFORMATION**

<u>Governing Body</u>	<u>Mode</u>	<u>Proper Shipping Name</u>		
DOT	Ground	Petroleum distillates, N.O.S. (Mineral Spirits)		

<u>Governing Body</u>	<u>Mode</u>	<u>Hazard Class</u>	<u>UN/NA No.</u>	<u>Label</u>
DOT	Ground	3 (Flammable liquid)	1268	

**14. REGULATORY INFORMATION**

<b>Regulatory List</b>	<b>Component</b>	<b>CAS No.</b>
ACGIH 2000 - Short Term Exposure Limits	NAPHTHALENE	91-20-3
ACGIH 2000 - Skin Absorption Designation	NAPHTHALENE	91-20-3
ACGIH 2000 - Time Weighted Averages	NAPHTHALENE	91-20-3
ACGIH 2000 - Time Weighted Averages	STODDARD SOLVENT	8052-41-3
CAA - 1990 Hazardous Air Pollutants	NAPHTHALENE	91-20-3
California - Prop. 65 - Cancer list	NAPHTHALENE	91-20-3
Canada - WHMIS: Ingredient Disclosure	1,2,4-TRIMETHYLBENZENE	95-63-6
Canada - WHMIS: Ingredient Disclosure	1,3,5-TRIMETHYLBENZENE	108-67-8
Canada - WHMIS: Ingredient Disclosure	NAPHTHALENE	91-20-3
Canada - WHMIS: Ingredient Disclosure	STODDARD SOLVENT	8052-41-3
CERCLA/SARA - Haz Substances and their RQs	NAPHTHALENE	91-20-3
CERCLA/SARA - Section 313 - Emission Reporting	1,2,4-TRIMETHYLBENZENE	95-63-6
CERCLA/SARA - Section 313 - Emission Reporting	NAPHTHALENE	91-20-3
Inventory - Canada - Domestic Substances List	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - Canada - Domestic Substances List	1,3,5-TRIMETHYLBENZENE	108-67-8
Inventory - Canada - Domestic Substances List	NAPHTHALENE	91-20-3
Inventory - Canada - Domestic Substances List	STODDARD SOLVENT	8052-41-3
Inventory - European EINECS Inventory	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - European EINECS Inventory	1,3,5-TRIMETHYLBENZENE	108-67-8
Inventory - European EINECS Inventory	NAPHTHALENE	91-20-3
Inventory - European EINECS Inventory	STODDARD SOLVENT	8052-41-3
Inventory - Japan - (ENCS)	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - Japan - (ENCS)	1,3,5-TRIMETHYLBENZENE	108-67-8
Inventory - Japan - (ENCS)	NAPHTHALENE	91-20-3
Inventory - Korea - Existing and Evaluated	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - Korea - Existing and Evaluated	1,3,5-TRIMETHYLBENZENE	108-67-8
Inventory - Korea - Existing and Evaluated	NAPHTHALENE	91-20-3
Inventory - Korea - Existing and Evaluated	STODDARD SOLVENT	8052-41-3
Inventory - TSCA - Sect. 8(b) Inventory	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - TSCA - Sect. 8(b) Inventory	1,3,5-TRIMETHYLBENZENE	108-67-8
Inventory - TSCA - Sect. 8(b) Inventory	NAPHTHALENE	91-20-3
Inventory - TSCA - Sect. 8(b) Inventory	STODDARD SOLVENT	8052-41-3
Massachusetts Right To Know List	1,2,4-TRIMETHYLBENZENE	95-63-6
Massachusetts Right To Know List	1,3,5-TRIMETHYLBENZENE	108-67-8
Massachusetts Right To Know List	NAPHTHALENE	91-20-3
Massachusetts Right To Know List	STODDARD SOLVENT	8052-41-3
New Jersey - Department of Health RTK List	1,2,4-TRIMETHYLBENZENE	95-63-6
New Jersey - Department of Health RTK List	1,3,5-TRIMETHYLBENZENE	108-67-8
New Jersey - Department of Health RTK List	NAPHTHALENE	91-20-3
New Jersey - Department of Health RTK List	STODDARD SOLVENT	8052-41-3
NJ Environmental Hazardous Substances List	1,2,4-TRIMETHYLBENZENE	95-63-6
NJ Environmental Hazardous Substances List	NAPHTHALENE	91-20-3
OSHA - Final PELs - Time Weighted Averages	NAPHTHALENE	91-20-3
OSHA - Final PELs - Time Weighted Averages	STODDARD SOLVENT	8052-41-3
Pennsylvania Right to Know List	1,2,4-TRIMETHYLBENZENE	95-63-6
Pennsylvania Right to Know List	NAPHTHALENE	91-20-3
Pennsylvania Right to Know List	STODDARD SOLVENT	8052-41-3
TSCA - Sect. 12(b) - Export Notification	1,3,5-TRIMETHYLBENZENE	108-67-8

**Title III Classifications Sections 311,312:**

- Acute: **YES**
- Chronic: **NO**
- Fire: **YES**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

#### **15. OTHER INFORMATION**

Overexposure to naphthalene, a minor component of this product, may cause skin, eye and respiratory tract irritation, anemia, loss of vision, nervous system effects and kidney and thymus damage. Also, exposure to naphthalene has produced "respiratory tract" tumors in laboratory animals..

# Material Safety Data Sheet

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### Texaco Anti-Freeze/Coolant

Product Use: Antifreeze/Coolant

Product Number(s): 02353, CPS222353

#### Company Identification

Chevron Global Lubricants

Global Lubricants

6975-A Pacific Circle

Mississauga, ONT L5T 2H3

Canada

www.chevronlubricants.com

#### Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

#### Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

#### Product Information

email : lubemsds@chevrontexaco.com

Product Information: (800) LUBE TEK

MSDS Requests: (800) 414-6737

## SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene Glycol	107-21-1	90 - 97 %weight
Diethylene glycol	111-46-6	1 - 5 %weight

Information on ingredients that are considered Controlled Products and/or that appear on the WHMIS Ingredient Disclosure List (IDL) is provided as required by the Canadian Hazardous Products Act (HPA, Sections 13 and 14). Ingredients considered hazardous under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, are also listed. See Section 15 for additional regulatory information.

## SECTION 3 HAZARDS IDENTIFICATION

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\*\*\*\*\*

### EMERGENCY OVERVIEW

- HARMFUL OR FATAL IF SWALLOWED
- POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL THAT MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA
- MAY CAUSE DAMAGE TO:
- KIDNEY

\*\*\*\*\*  
\*\*\*\*\*

#### IMMEDIATE

Eye: Not expected to cause prolonged or significant eye irritation.

#### HEALTH

#### EFFECTS

**Skin:** Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.

**Ingestion:** Toxic; may be harmful or fatal if swallowed.

**Inhalation:** The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Breathing this material at concentrations above the recommended exposure limits may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

#### **DELAYED OR OTHER HEALTH EFFECTS:**

**Reproduction and Birth Defects:** Contains material that may cause birth defects based on animal data.

**Target Organs:** Contains material that may cause damage to the following organ(s) following repeated ingestion based on animal data: Kidney

See Section 11 for additional information. Risk depends on duration and level of exposure.

### **SECTION 4 FIRST AID MEASURES**

**Eye:** No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:** No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

**Inhalation:** Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

### **SECTION 5 FIRE FIGHTING MEASURES**

#### **FLAMMABLE PROPERTIES:**

**Flashpoint:** (Pensky-Martens Closed Cup) 127 °C (260 °F)

**Autoignition:** No Data Available

**Flammability (Explosive) Limits (% by volume in air):** Lower: 3.2 Upper:

**EXTINGUISHING MEDIA:** Dry Chemical, CO<sub>2</sub>, AFFF Foam or alcohol resistant foam.

#### **PROTECTION**

#### **OF**

#### **FIRE**

#### **FIGHTERS:**

**Fire Fighting Instructions:** This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Phosphorus, Potassium.

### **SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities as appropriate or required.

### **SECTION 7 HANDLING AND STORAGE**

**Precautionary Measures:** Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling.

**General Handling Information:** Do not taste or swallow antifreeze or solution. Keep out of the reach of children and animals.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient.



Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

**General Storage Information:** Do not store in open or unlabeled containers.  
**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### GENERAL

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

### CONSIDERATIONS:

### ENGINEERING

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

### CONTROLS:

### PERSONAL

### PROTECTIVE

### EQUIPMENT

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Natural rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride (PVC) or Vinyl).

**Respiratory Protection:** Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

### Occupational Exposure Limits:

Component	Country/ Agency	TWA	STEL	Ceiling	Notation
Ethylene Glycol	ACGIH	--	--	100 mg/m3	--

**NOTE ON OCCUPATIONAL EXPOSURE LIMITS:** Consult local authorities for acceptable provincial values in Canada. Consult the Canadian Standards Association Standard 94.4-2002 Selection, Use and Care of Respirators.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Attention:** the data below are typical values and do not constitute a specification.

**Color:** Green

**Physical State:** Liquid

**Odor:** Faint or Mild

**pH:** 10.2 - 11

**Vapor Pressure:** <0.1 mmHg @ 20 °C (68 °F)

Vapor Density (Air = 1): 2.1 (Typical)  
 Boiling Point: 196.1°C (385°F)  
 Solubility: Miscible  
 Freezing Point: -36.7°C (-34°F)  
 Specific Gravity: 1.13 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)  
 Viscosity: No data available  
 Evaporation Rate: No Data Available  
 Odor Threshold: No Data Available  
 Coefficient of Water/Oil Distribution: No Data Available

#### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility With Other Materials:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Hazardous Decomposition Products:** Ketones (Elevated temperatures), Aldehydes (Elevated temperatures)

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Sensitivity to Mechanical Impact:** No.

#### SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE	HEALTH	EFFECTS
<b>Eye Irritation:</b> The eye irritation hazard is based on evaluation of data for similar materials or product components.		
<b>Skin Irritation:</b> The skin irritation hazard is based on evaluation of data for similar materials or product components.		
<b>Skin</b>	<b>Sensitization:</b>	No product toxicology data available.
<b>Acute Dermal Toxicity:</b> The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.		
<b>Acute Oral Toxicity:</b> LDLo-Lowest Lethal Dose: 1.56 g/kg (human) The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.		
<b>Acute Inhalation Toxicity:</b> The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components. For additional information on the acute toxicity of the components, call the technical information center.		

ADDITIONAL	TOXICOLOGY	INFORMATION:
This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage.		
This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.		

#### SECTION 12 ECOLOGICAL INFORMATION

##### ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

##### ENVIRONMENTAL FATE

This material is expected to be readily biodegradable.

#### SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by USEPA under RCRA (40CFR261), Environment Canada, or other State, Provincial, and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

#### SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**TC Shipping Description:** NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER TDG REGULATIONS

**IMO/IMDG Shipping Description:** NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** Anti-freeze Preparations, Proprietary; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

**DOT Shipping Description:** Anti-freeze Preparations, Proprietary

**Additional Information:** Bulk shipments with a reportable quantity (5000 pounds) of ethylene glycol are a hazardous material. The Proper Shipping Name is: Environmentally Hazardous Substance, Liquid, N.O.S. (ethylene glycol), 9, UN3082, III, RQ (ethylene glycol).

#### SECTION 15 REGULATORY INFORMATION

##### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1

01-2A=IARC Group 2A

01-2B=IARC Group 2B

35=WHMIS IDL

The following components of this material are found on the regulatory lists indicated.

Ethylene Glycol

35

##### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

##### WHMIS CLASSIFICATION:

Class D, Division 1, Subdivision B: Toxic Material -  
Acute Lethality

Class D, Division 2, Subdivision A: Very Toxic Material -  
Teratogenicity and Embryotoxicity

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations. (See Hazardous Products Act (HPA), R.S.C. 1985, c.H-3,s.2).

##### MSDS PREPARATION:

This Material Safety Data Sheet has been prepared by the Toxicology and Health Risk Assessment Unit, ERTC, P.O. Box 1627, Richmond, CA 94804, (888)676-6183.

**Revision Date:** September 21, 2007

#### SECTION 16 OTHER INFORMATION

**HMIS RATINGS:** Health: 2\* Flammability: 1 Reactivity: 0

##### LABEL RECOMMENDATION:

Label Category : ANTIFREEZE/COOLANT 1 - AFC1

**REVISION STATEMENT:** This revision updates the following sections of this Material Safety Data Sheet: 9

## ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



# TEXACO ANTI-FREEZE COOLANT

## CPS 222353 (MSDS 10298) TEXACO ANTI-FREEZE COOLANT

Texaco Anti-Freeze Coolant is a universal, low silicate, all purpose coolant designed for use in both automotive engines and heavy-duty diesel engines, particularly those containing aluminum alloys.

## CPS 227975 (MSDS 10308) TEXACO PREDILUTED 50/50 ANTI-FREEZE COOLANT

Texaco Prediluted 50/50 Anti-Freeze Coolant is a 50/50 mixture of Texaco Anti-Freeze Coolant with deionized water.

### PRODUCT APPLICATION

Texaco Anti-Freeze Coolant is specially formulated to meet the stringent aluminum corrosion protection requirements of automotive engines. Because of its low concentration of silicate, it also complies with Cummins and other heavy-duty diesel engine manufacturers' silicate requirements. This product is also suitable for use in industrial internal combustion engines where an anti-freeze/coolant is required to provide protection against freezing, boil over, and corrosion. Texaco Anti-Freeze Coolant does not meet DEX COOL® requirements.

Note: These products are not to be used to protect the inside of potable water systems against freezing.

### PRODUCT DESCRIPTIONS AND FEATURES

Texaco Anti-Freeze Coolant is a single phase, ethylene glycol based product blended with a premium quality additive package. It is a universal low silicate coolant designed for use in both heavy-duty diesel and automotive engines, particularly those containing aluminum alloys. This product provides antifoam properties, and rust and corrosion protection for aluminum, brass, copper, solder, steel and cast iron. It mixes readily with any clean tap water and is compatible with cooling system filters and supplemental additives.

Texaco Anti-Freeze Coolant is free of nitrites and amines.

In service Texaco Anti-Freeze Coolant provides:

- Universal formula for both automotive and heavy-duty diesel engines (ASTM D 3306 and ASTM D 4985)
- Aluminum corrosion protection

- Heat transfer properties
- Antifoam characteristics
- Corrosion protection for aluminum, brass, copper, solder, steel and cast iron
- Low silicate formulation
- Nitrite-free, amine-free and borax-free
- Mixes readily with clean tap water
- Compatible with cooling system filters
- Compatible with heavy duty diesel supplemental coolant additives
- Compatible with most major brands of coolant

### PRODUCT RECOMMENDATIONS AND APPROVALS

Texaco Anti-Freeze Coolant meets:

- ASTM D 3306 for automotive service
- ASTM D 4985 for heavy duty diesel service

Texaco Prediluted 50/50 Anti-Freeze Coolant meets:

- ASTM D 4656 for pre-blend automotive service
- ASTM D 5345 for pre-blend heavy duty diesel service

Texaco Anti-Freeze Coolant meets or exceeds the requirements of the following specifications: (It should be noted that many heavy-duty diesel manufacturers are changing their requirements to simply require ASTM D 4985.)

- **AAMVA**
- **General Motors**
  - GM1825M, GM 1899M (performance corresponding to GM 6038M)
- ASTM D 3306 including ASTM D 4340, ASTM D 4985
- **Chrysler MS-7170**
- **Cummins 90T8-4**
- **Detroit Diesel Corp**
- Federal Specification A-A-870
- **Ford ESE-M97B44-A**
- **Freightliner**
- **J.I. Case JIC 501**
- **John Deere H24B1, H24C1**
- **Mack Truck**
- **PACCAR**
- SAE J1034
- TMC of ATA RP-302A

## Texaco Anti-Freeze Coolant — Continued

## PRODUCT MAINTENANCE

## Recommended Dilutions for Texaco Anti-Freeze Coolant

Boiling Protection, °C° F) (15 lb pressure cap) 50% (1 part antifreeze/1 part water)	129.4(265)
Freezing Protection, °C(°F)	
40% (2 parts antifreeze/3 parts water)	-24.4(-12)
50% (1 part antifreeze/1 part water)	-36.7(-34)
60% (3 parts antifreeze/2 parts water)	-52.2(-62)

## Notes

For optimum year round protection against freezing, boiling and corrosion, a 50 percent Texaco Anti-Freeze Coolant solution (1 part antifreeze/1 part water) is recommended. For maximum protection against freezing in extremely cold areas a 60 percent solution (3 parts antifreeze/2 parts water) can be used. Concentrations greater than 67 percent or less than 40 percent are not recommended.

Texaco Prediluted 50/50 Anti-Freeze Coolant should be used as manufactured. No dilution is recommended.

Original Equipment Manufacturer (OEM) recommendations should be followed when adding supplemental coolant additives, or when changing out cooling systems. Always dispose of used coolant in accordance with local, state, and federal guidelines.

In order to prevent the formation of silicate gel in storage containers, concentrated Texaco Anti-Freeze Coolant should not be stored longer than eighteen months without agitation, and should not be prediluted with supplemental coolant additives until it is ready to be used.

## TYPICAL TEST DATA

## Texaco Anti-Freeze Coolant

CPS Number		222353
MSDS Number		10298
Appearance		Fluorescent green
Specific gravity 60/60°C		1.130
Freezing point, °C <sup>a</sup>	ASTM D 1177	-37
pH <sup>b</sup>	ASTM D 1287	10.5
Reserve alkalinity <sup>c</sup>	ASTM D 1121	12.0
Silicate, % <sup>d</sup>		0.09

- a. 50 vol % aqueous solution
- b. 1:2 dilution with water
- c. as received
- d. as anhydrous alkali metasilicate

Typical test data are average values only. Minor variations which do not affect product performance are to be expected in normal manufacturing.

## Texaco Anti-Freeze Coolant

## ASTM D 1384 Glassware Corrosion Test

	ASTM Limit	Weight loss, mg per coupon*
Copper	10 max	3
Solder	30 max	-1
Brass	10 max	3
Steel	10 max	-1
Iron	10 max	1
Aluminum	30 max	4

\* Negative indicates net gain

## HANDLING PRACTICES

For information on the safe handling and use of these products, refer to their Material Safety Data Sheets. For more information and availability, call 1-866-688-8890.

HCC ID: 610708-H01-070322

HOUGHTON CHEMICAL CORPORATION  
MATERIAL SAFETY DATA SHEET

"PAH-NOL U-900 UNIVERSAL ANTIFREEZE/COOLANT CONCENTRATE"

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**SECTION 1**  
**IDENTIFICATION**

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**MANUFACTURER:** Houghton Chemical Corporation

**ADDRESS:** 52 Cambridge Street, Allston, MA 02134

**EMERGENCY TELEPHONE:** (617) 254-1010, 1-800-777-2466 or  
Chemtrec 1-800-424-9300

**CHEMICAL NAME & SYNONYMS:** Permanent Antifreeze and Summer Coolant

**CHEMICAL FAMILY:** Ethylene Glycol Based

**FORMULA:** Trade Secret

**CAS REGISTRY NUMBER:** Not Applicable for blended product

**DOT SHIPPING CLASSIFICATION:** Not regulated in quantities containing less than 5,000  
pounds of ethylene glycol

**PRODUCT NUMBER:** 610708, 620702, 630703, 660706, 61708, 62702,  
63703

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**SECTION 2**  
**HAZARDOUS INGREDIENTS**

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MATERIAL	CAS #	%	TLV (Units)
Ethylene Glycol	107-21-1	90-95	50 ppm
Diethylene Glycol	111-46-6	≤ 5	Not applicable
Water	7732-18-5	3	Not applicable
Corrosion Inhibitors	(TSR#40670300-500P)	2	Not applicable

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**SECTION 3**  
**PHYSICAL DATA**

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BOILING POINT @760 mm Hg.:	325°F
FREEZING POINT:	-4°F
SPECIFIC GRAVITY:	1.12
VAPOR PRESSURE AT 20°C:	0.1
VAPOR DENSITY (air = 1):	2.1
SOLUBILITY IN WATER:	Complete
% VOLATILE BY VOLUME:	Greater than 95%
EVAPORATION RATE:	Less than 1
APPEARANCE AND ODOR:	Fluorescent green; mild odor

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**SECTION 4**  
**FIRE AND EXPLOSION HAZARD DATA**

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FLASH POINT:	250°F - TOC 225°F - TCC
AUTO IGNITION TEMPERATURE:	Not Applicable
FLAMMABLE LIMITS IN AIR:	LEL = 3.0UEL = 16 (calculated)
EXTINGUISHING MEDIA:	Water, fog, alcohol foam, dry chemical or CO <sub>2</sub> for small fires
SPECIAL FIRE FIGHTING PROCEDURES:	A solid stream of water directed into hot burning liquid can cause frothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None

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**SECTION 5**  
**REACTIVITY DATA**

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STABILITY:	This material is stable.
INCOMPATIBILITY:	Keep away from strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS:	Burning can produce carbon dioxide or carbon monoxide.
HAZARDOUS POLYMERIZATION:	Will not occur.



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**SECTION 6**  
**HEALTH HAZARD DATA**

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<b>THRESHOLD LIMIT VALUE:</b>	50 ppm (vapor or mist)
<b>EFFECTS OF OVEREXPOSURE:</b>	Irritating to eyes and skin. Inhalation irritates nose and throat. High vapor concentration causes nausea, vomiting and headaches.
<b>Eye Contact:</b>	Irritation may result.
<b>Skin:</b>	May be mildly irritating to skin. Slightly toxic on prolonged or repeated contact.
<b>Inhalation:</b>	Exposure to high vapor concentration from heated antifreeze coolant or exposure to mists may produce nausea, vomiting, headache, dizziness and irregular eye movements.
<b>Ingestion:</b>	Swallowing causes abdominal discomfort or pain, dizziness, lumbar pain, oliguria, uremia and central nervous system depression. Large volumes cause kidney damage and can be fatal.

**EMERGENCY AND FIRST AID PROCEDURES:**

<b>Eyes:</b>	Flush with plenty of water for at least 15 minutes.
<b>Skin:</b>	Flush with plenty of water, wash with mild soap if available.
<b>Inhalation:</b>	Remove to fresh air; give artificial respiration if breathing has stopped.
<b>Ingestion:</b>	If swallowed, IMMEDIATELY contact a poison center, emergency treatment center, or physician.

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**SECTION 7**  
**SPILL OR LEAK PROCEDURES**

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**STEPS TO BE TAKEN IN CASE THE MATERIAL IS SPILLED OR RELEASED:**

Wear suitable protective equipment. Large spills should be contained and collected. Small spills can be collected or may be absorbed with appropriate liquid absorbing materials. All spill response and disposal should be carried out in accordance with federal, state and local requirements.

**WASTE DISPOSAL METHOD:**

Consult with local sewer, municipal, state and/or federal agencies to determine appropriate current disposal options.

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**SECTION 8**  
**SPECIAL PROTECTIVE INFORMATION**

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**RESPIRATORY PROTECTION:**

Provide adequate ventilation with local exhaust system.

**VENTILATION:**

Mechanical or other

**PROTECTIVE GLOVES:**

Rubber gloves recommended.

**EYE PROTECTION:**

Safety glasses or goggles.

**OTHER PROTECTIVE EQUIPMENT:**

Normally not required

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**SECTION 9**  
**SPECIAL PRECAUTIONS**

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**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

Do not breathe mist or spray. Follow good work/hygiene practices. Provide safety shower and wash in immediate area. Workers should wash with soap and water before eating, smoking or using toilet facilities. Launder contaminated clothing before re-use.